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PACIFIC PULP & PAPER INDUSTRY



REVIEW NUMBER

MAY · 1939



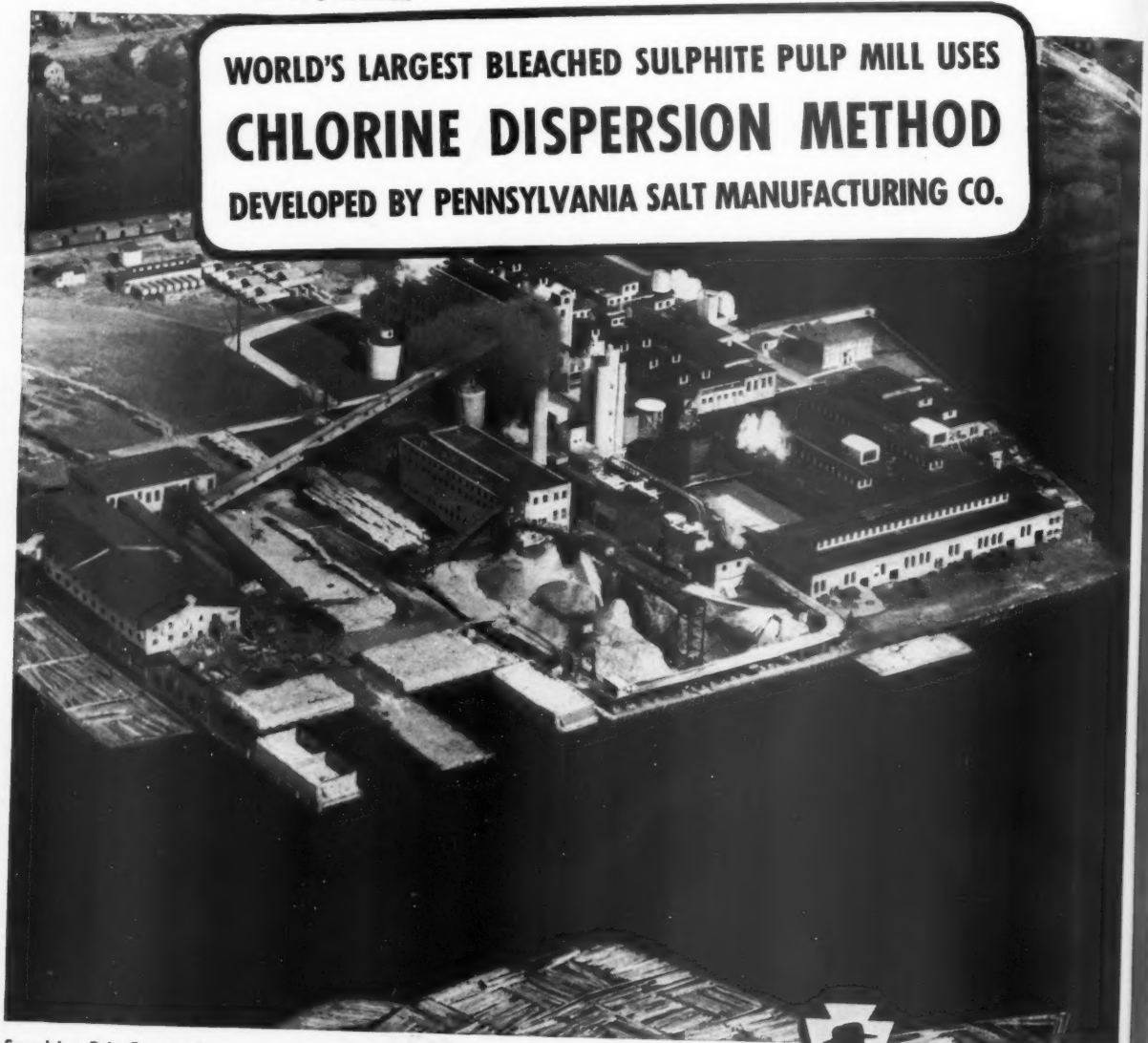
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PENNSYLVANIA SALT MANUFACTURING CO. OF WASHINGTON
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WORLD'S LARGEST BLEACHED SULPHITE PULP MILL USES
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Soundview Pulp Company's mill at Everett, Washington

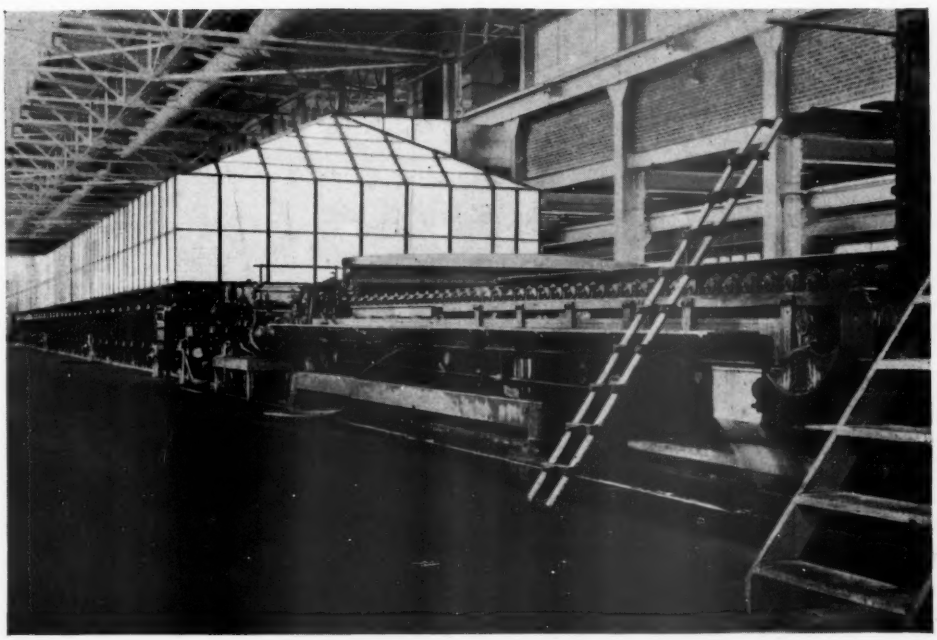
PENNSYLVANIA SALT
Chemicals

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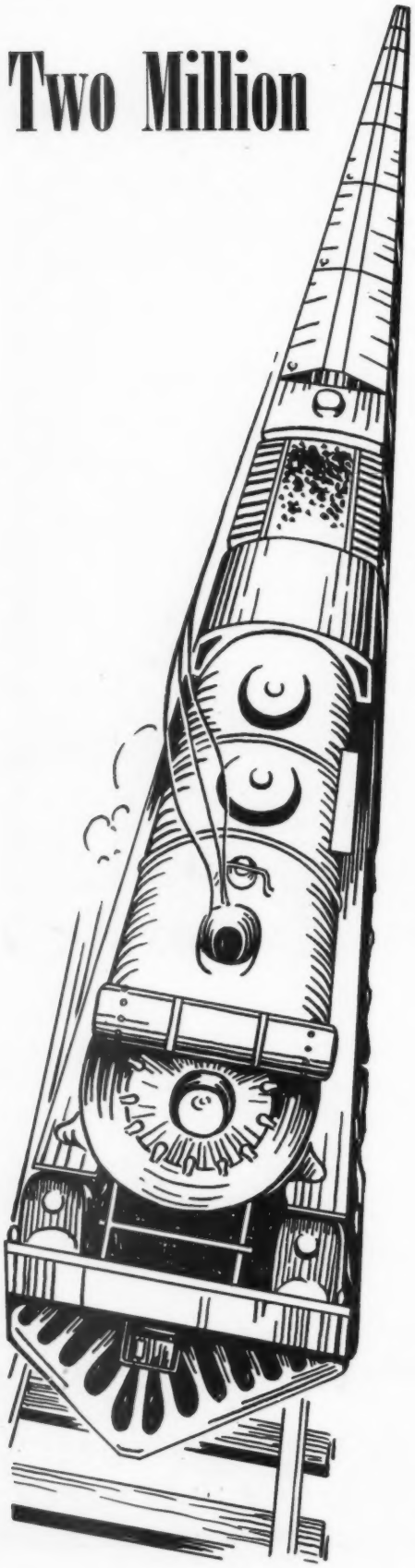
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THE BELOIT WAY BELOIT IRON WORKS PAPER MACHY BELOIT, WIS. U.S.A. **IS THE MODERN WAY**

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THIS TONNAGE REPRESENTS THE FOLLOWING ANNUAL SAVINGS TO THE SULPHITE MILLS ON THE NORTH AMERICAN CONTINENT . . .

1. 150,000 tons of COAL - - equivalent to 3000 carloads of 50 tons each, or 30 solid trains of 100 cars each. This is equal to $600,000.

2. 40,000 tons of SULPHUR--equivalent to 1000 carloads, or 10 solid trains of 100 cars each. This is equal to $880,000.

3. 40,000 tons of LIMESTONE--which is also equivalent to 1000 carloads, or 10 solid trains of 100 cars each. This is equal to $120,000.

4. WOOD saving is variable due to the quality of the wood used and the length of the cooking time; but normally this represents an average saving of approximately 206,000 cords, which is equivalent to over 9000 carloads, or 90 solid trains of 100 cars each. This is equal to $2,678,000.

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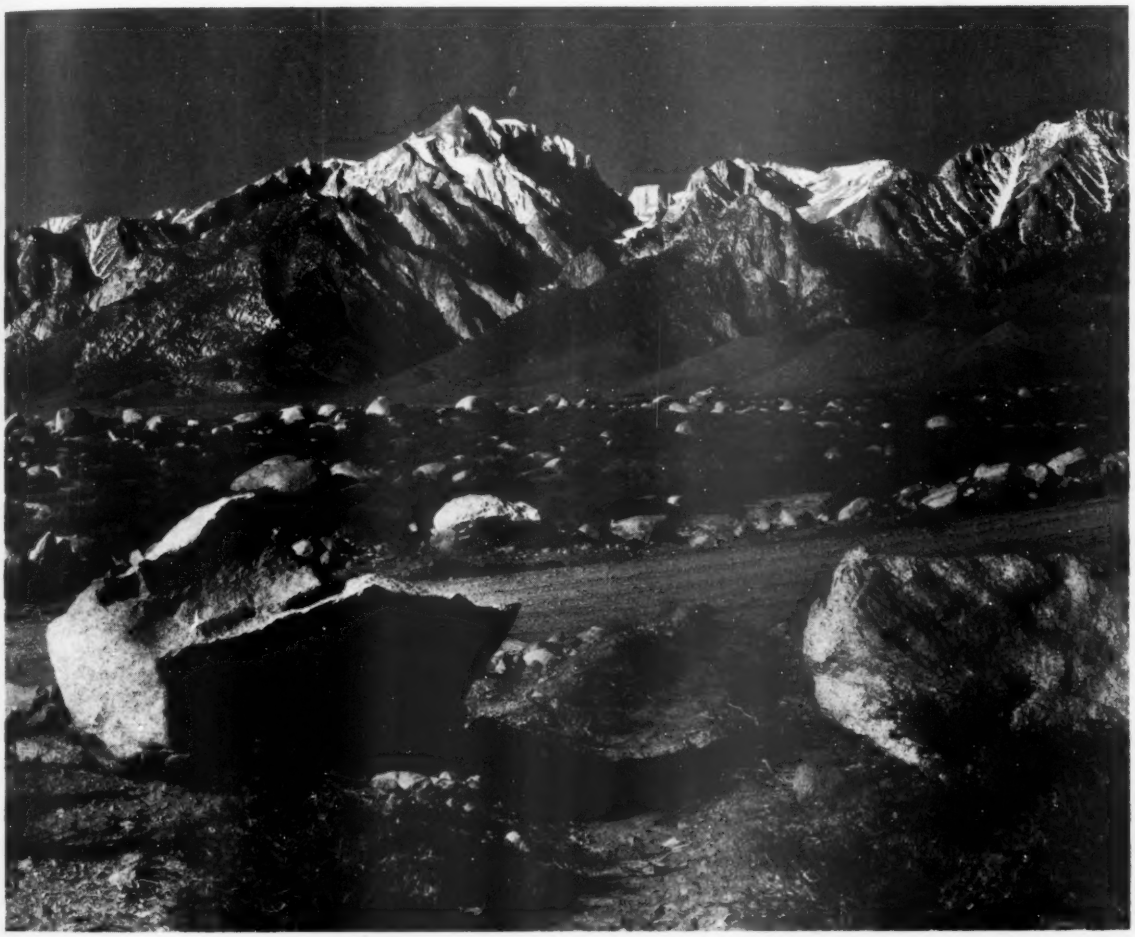
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When you buy a Huyck Felt, you add to your staff a group of experts backed by 70 years of service to the paper  industry.

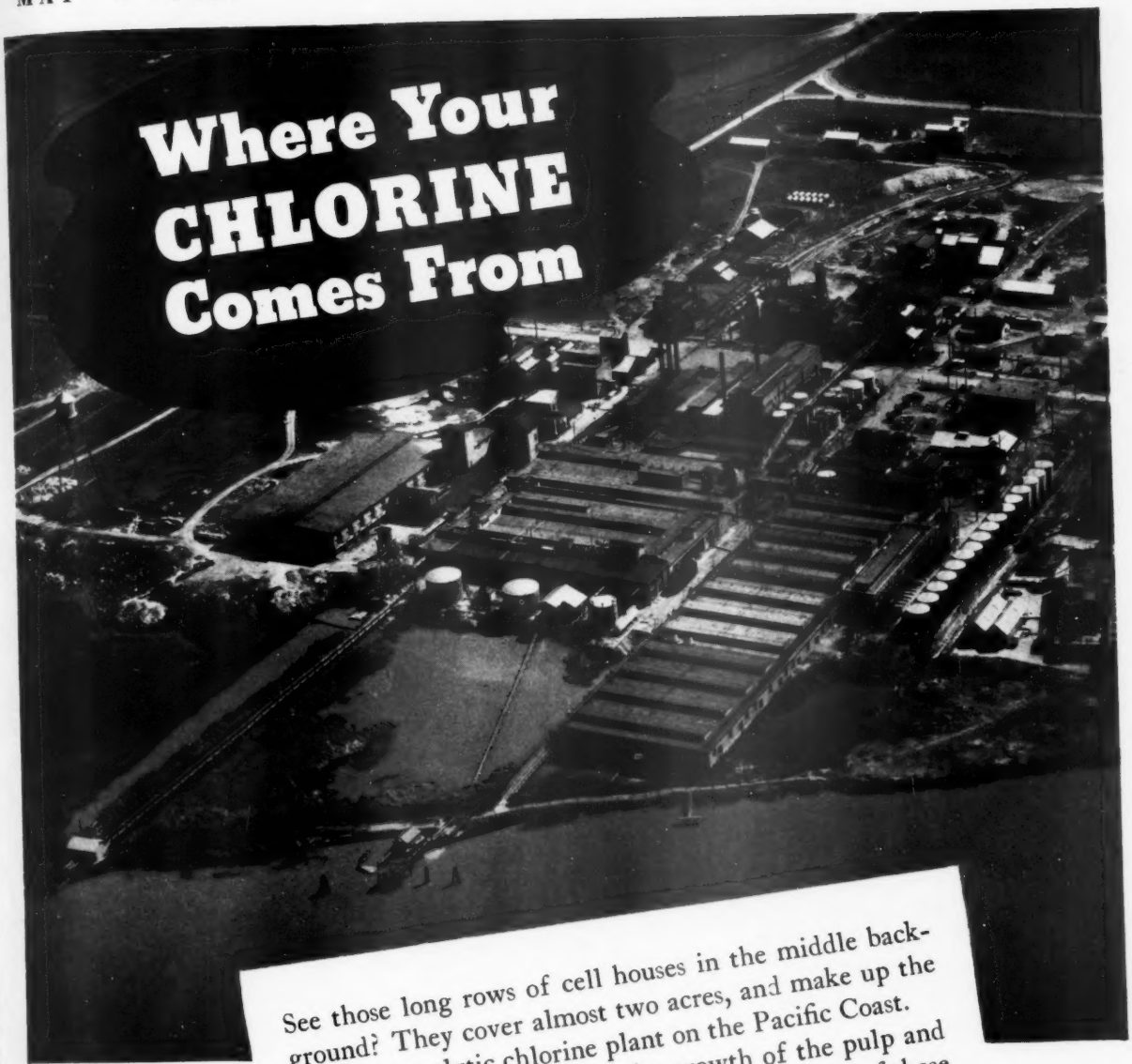
They study your equipment, your needs, your production problems. They design, especially for you,  felts of just the right specifications for each job.  And they continue to work, for you and *with* you, to provide in your mill continuous  satisfaction in felt performance. No wonder that with such service, Huyck Felts  are  the choice of leading papermakers everywhere.



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See those long rows of cell houses in the middle background? They cover almost two acres, and make up the oldest electrolytic chlorine plant on the Pacific Coast.

You could get an idea of the growth of the pulp and paper industry on the Coast by tracing the growth of these cell houses. Twenty-odd years ago there were only four houses. Today they total fourteen; and a substantial portion of Bear Brand Chlorine production goes to serve the pulp and paper mills.

You can easily guess the reasons for this growth in Bear Brand Chlorine production: a top-grade product and unfailing delivery.

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AN ABUNDANCE of WESTERN HEMLOCK is the foundation upon which the pulp and paper industry of the Pacific Coast continues its development ' ' ' Here is pictured the log haul of the St. Helens Pulp & Paper Company, at St. Helens, Oregon, on the Columbia River.

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Pacific PULP & PAPER Industry

The Journal of the Pacific Coast Industry

ANNUAL REVIEW and STATISTICAL NUMBER

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Table of Contents on Page 136

SELLING AGENTS

for WOOD PULP and PAPER

BULKLEY, DUNTON & CO. NEW YORK, N.Y. ESTABLISHED 1837

BULKLEY DUNTON PULP CO., Inc.

295 MADISON AVENUE NEW YORK, N. Y.

The Underprivileged One-Third

One-third of the area of the United States, six hundred million acres, is in forest land . . . It has not had the opportunity to make its maximum potential contribution to the wealth and employment of our people, because it is underprivileged in competing in the American market against foreign products from foreign countries paying low wages . . . As long as American forests are prevented by the lack of National Forest Policy from contributing their maximum wealth and employment, the American people are missing a great opportunity

WHY have we missed this opportunity to utilize a great natural resource, a resource that is renewable year after year as are wheat, corn and cotton?

We are backward in developing our forests on a permanent basis because of a mistaken definition of what constitutes conservation as applied to our forests. Back in the days when Theodore Roosevelt was president and Gifford Pinchot was chief forester, a wave of enthusiasm for conservation of natural resources spread over the country, inspired by the noble motive of saving natural raw materials for our children and grandchildren.

Unfortunately for the welfare of the American people, the word "conservation" was interpreted a third of a century ago as meaning a "locking up," instead of wise utilization. Unfortunately, too, the forests, a renewable resource, were classified with the non-renewable mineral resources. No one would have classed wheat, corn or cotton along with the minerals. Forests are living things, too, but in those days few Americans realized this fact.

The conservation movement did bring about the creation of our national forests, which was a good step to take, but the error lay in locking them up instead of planning for their use as a replaceable crop.

Our privately owned timber was not locked up for the most part but utilized as markets could be found, or as the pressure of bank loans and taxes forced their liquidation. But there was no plan of renewing the forests back of either the creation of the national forests or of the cutting of private timber. The negative thought of "saving what timber we have for it can never be replaced" persisted.

To reduce the drain on our own forests we removed the duties on wood pulp and newsprint and invited foreign countries to sell us the products of their forests. We thought we were smart, for we would still have forests when the foreigners had exhausted theirs.

Planning for the present or the future does not arise out of negative ideas. No constructive forest policy was formulated. Throughout the country the cutting down of the forests for economic use was criticized, the gradual reduction of the virgin forests was bemoaned. Had the phrase "timber cropping" been used, few would have known what it meant. Most people would have suspected it was a trick of the logger and lumberman to justify cutting down more trees.

The United States is the largest market in the world for forest products. Within the United States are the greatest resources of accessible commercial timber possessed by any single country.

Yet this country is the largest importer of forest products. In 1938 we imported logs, lumber, wood manufactures, paper and pulp valued at $229,634,376. In 1937 imports of these products amounted to $285,309,684.

In wood pulp alone, 73 per cent of the total sold in the United States in 1938 was imported.

The pulp and paper industry of the United States is estimated to have consumed approximately 8,000,000 cords of domestic wood in 1938 while imports of wood in the form of pulpwood, pulp and newsprint amounted to around 7,400,000 cords.

In 1937 the pulp and paper industry in this country consumed roughly 8,400,000 cords of pulpwood and imported, in the form of pulpwood, wood pulp and newsprint, some 10,250,000 cords of wood.

On the other hand the United States is not a large exporter of forest products although it has the greatest commercial resources. In 1938 imports of logs, lumber, wood manufactures, paper and pulp exceeded exports by $137,757,966; and in 1937 these imports exceeded exports by $151,386,651.

Though we have the forests we don't even come close to supplying our own market for forest products.

THESE FIGURES DON'T MAKE SENSE. THEY POINT TO A MISSED OPPORTUNITY TO CREATE WEALTH AND FURNISH EMPLOYMENT FOR OUR OWN PEOPLE.

Gradually a few thinking people began to realize that trees are living plants, that they have life cycles like wheat and cotton, the only difference being in the length of time. It was discovered that trees die of old age, that they cease to grow after reaching maturity. Like man, the economic value of a tree rises and then declines.

This realization led to the recognition of the fact that the replacing of old, mature timber with young, vigorous growth would create greater wealth from our forests. The movement for reforestation began and out of it has come the firm belief in the minds of a great many Americans that our trees should be treated as a crop, harvested when mature to make way for new growth. Their conviction that this is the fundamentally sound policy rests upon common sense and also upon the experience of European countries over several centuries.

● With the American market for forest products wide open to imports, the imports expanded as the market grew. As American costs of production rose, due to less accessible timber, higher wages and mounting taxes, the advantages of foreign producers with low production costs became more and more effective in capturing a larger share of the American market.

This is particularly true of wood pulp and newsprint, two of the most valuable products of the forest.

In 1931 England left the gold standard, carrying with her the Scandinavian countries, whose exports are largely forest products form well managed forests. Their natural advantages, plus the unnatural advantages of depreciated currencies, came close to eliminating the American pulp industry and what was left of the newsprint industry. Prices fell so low that the forests of pulpwood had almost no value and standing timber was no longer considered good security for mortgage loans. In 1933 parity was tempo-

rarily restored by devaluation of the dollar, but in the Fall of 1938 the value of the British pound declined again in relation to the dollar, giving the foreign pulp and newsprint producers a monetary advantage of around $3.00 per ton.

Today, and for the past third of a century, the forests of the United States are economically oppressed by governmental policies that fail to recognize their possibilities for contributing to the wealth and employment of our people.

The men and management of the American forest industries are not now and never have been organized as have the other major industries of the country to influence favorable legislation. In recent years the political consideration shown to growers of cotton, wheat and corn, as well as other groups of producers in this country while the interests of the forest industries have suffered, may well be reason for creation of an organization that will gain the attention of administration officials and congressional representatives. Subsidies and loans to farmers annually amount to many hundreds of millions of dollars. It is now practically an established policy for the Federal government to look after the welfare of this group of our citizens. Why, then, is it illogical to expect that those who constitute the guardians of our forests, those who grow and remanufacture one of our greatest renewable resources should not likewise be afforded some assistance?

● Contrary to the situation in the general "farm problem" of the United States, there is no national surplus of wood-pulp, paper and pulpwood. There is a domestic shortage. However, instead of encouraging domestic production and creating thousands of good paying jobs within our boundaries, the forest industries are told that it would jeopardize the Reciprocal Trade Treaty program if they were given protection against dumping of foreign products made by cheap foreign labor under a system of deliberately debased currencies.

The Key Is Markets

● The solution to the American forest problem, which includes reforestation, sustained-yield, taxes and last, but not least, the employment of thousands of Americans, lies in providing a market where the products of the forest can be sold at a price to pay all of the costs and a fair profit.

The solution lies in simple economics, not in government regulation. If the products of the forest are valuable, the private owners will be the first to cultivate and protect them, exercising every means to produce more wood.

All we need to do to solve the forest problem and to solve quite a portion of our unemployment problem, too, is to give greater value to our forests than they have today. Sound forest practices by private owners, state and Federal governments will follow automatically.

"THE MOST EFFECTIVE WAY TO ENCOURAGE THE GROWING OF TREES IS TO DEVELOP PROFITABLE REASONS FOR CUTTING THEM DOWN," said A. G. T. Moore, manager, Department of Conservation, Southern Pine Association, in a talk last November.

"Timber Cropping in the Douglas Fir Region," a booklet recently published jointly by the West Coast Lumbermen's Association and the Pacific Northwest Loggers' Association, says this: "The threat of a timber famine in the United States has passed. The public, industrial and cooperative efforts in fire prevention and other developments in forestry are bringing about a growth of timber more than adequate to supply all present requirements of consumption. The areas of land classified by planning commissions and other public agencies as better suited for timber culture than other forms of use are constantly expanding. They now exceed 600 million acres in the United States as a whole, a third of the country's soil and more than the aggregate of all land in agricultural crops, pasturage excepted. **The economic problem of forestry in the United States hereafter will not be how to supply enough timber for our requirements but how to find sufficient markets for the timber crops that these great areas of land are producing and will produce in the future. The forest problem, like the wheat problem or the cotton problem, is fundamentally one of markets."**

We are modernizing our forest practices; we must likewise modernize our forest products marketing practices.

● Under a mistaken definition of conservation, the Federal government opened our markets to the products of foreign forests and foreign labor, a competition American forests and Americans cannot meet. Now that the correct definition of conservation has been recognized, now that we realize the forests produce an annual crop which, if harvested, would produce greater employment and wealth, it is the duty of the Federal government to formulate a truly modern national forest policy and open the greatest forest products market in the world, the American market, to American forests and American workmen.



Looking Back on 1938

Although production and prices were down from the 1937 peaks, the year was not without gain for the pulp and paper industry on the Pacific Coast

THE best that can be said about 1938 as far as the pulp and paper industry on the Pacific Coast is concerned, is that it was not a good year. It was an unhappy year with the problems accentuated by the rapid decline of production and prices from the artificial boom levels of 1937.

Although the past year was disappointing from the standpoint of production and prices for the industry throughout the entire world, it did bring gains to the Pacific Coast.

Pulp producers on the Pacific Coast entered the year wondering how long the decline would last, which had set in during the final quarter of 1937, and how far it would go. At first it looked as if things might pick up toward the end of the first quarter. To meet privately made quotations on foreign pulp, to help stabilize the pulp market and to create confidence, the American pulp producers reduced pulp prices for the first quarter of the year. Bleached sulphite was brought down from $70 to $60, and unbleached sulphite from $57 down to $50-$52.

Inventories of wood pulp at the consuming mills, in warehouses and at the producing mills were too large to permit the price reductions to stabilize the pulp market. Continued pulp imports, much of which went into storage, contributed to the pressure on pulp prices. The decline continued. In June the American producers announced a reduction of $5 per ton on both bleached and unbleached sulphite, bringing the bleached price down to $55 and the unbleached price down to $45.

This action was taken to counteract to some extent the lower foreign quotations which were being made in connection with existing contracts foreign producers had with American converting mills, but also lower quotations for future delivery.

It had become evident that foreign pulp producers were "marrying" or "converting" the pulp contracts they had with consuming paper mills in the United States. The contracts between the foreign producers and the American paper mills were not as flexible either as to price or tonnage as were those between American pulp mills and the same buying mills. It was easier to cancel or defer the American contracts. The foreign producers generally insisted that the buyers recognize the validity of the contracts with them. The American producers of pulp did not threaten to enforce their contracts so they felt the full effect of the first curtailment of production by the consuming paper mills.

U. S. Pacific Coast Wood Pulp Production, 1923-1938

	Tons of 2,000 lbs.
1923	299,596
1924	309,433
1925	322,594
1926	378,005
1927	449,218
1928	562,514
1929	780,494
1930	815,089
1931	817,548
1932	607,662
1933	773,102
1934	935,033
1935	1,011,421
1936	1,198,431
1937	1,485,821
1938	1,036,220

•

British Columbia Wood Pulp Production, 1923-1938

	Tons of 2,000 lbs.
1923	217,076
1924	216,243
1925	230,733
1926	259,504
1927	296,253
1928	310,961
1929	304,619
1930	335,429
1931	310,029
1932	259,586
1933	343,897
1934	383,818
1935	377,522
1936	392,400
1937	389,000
1938	249,000

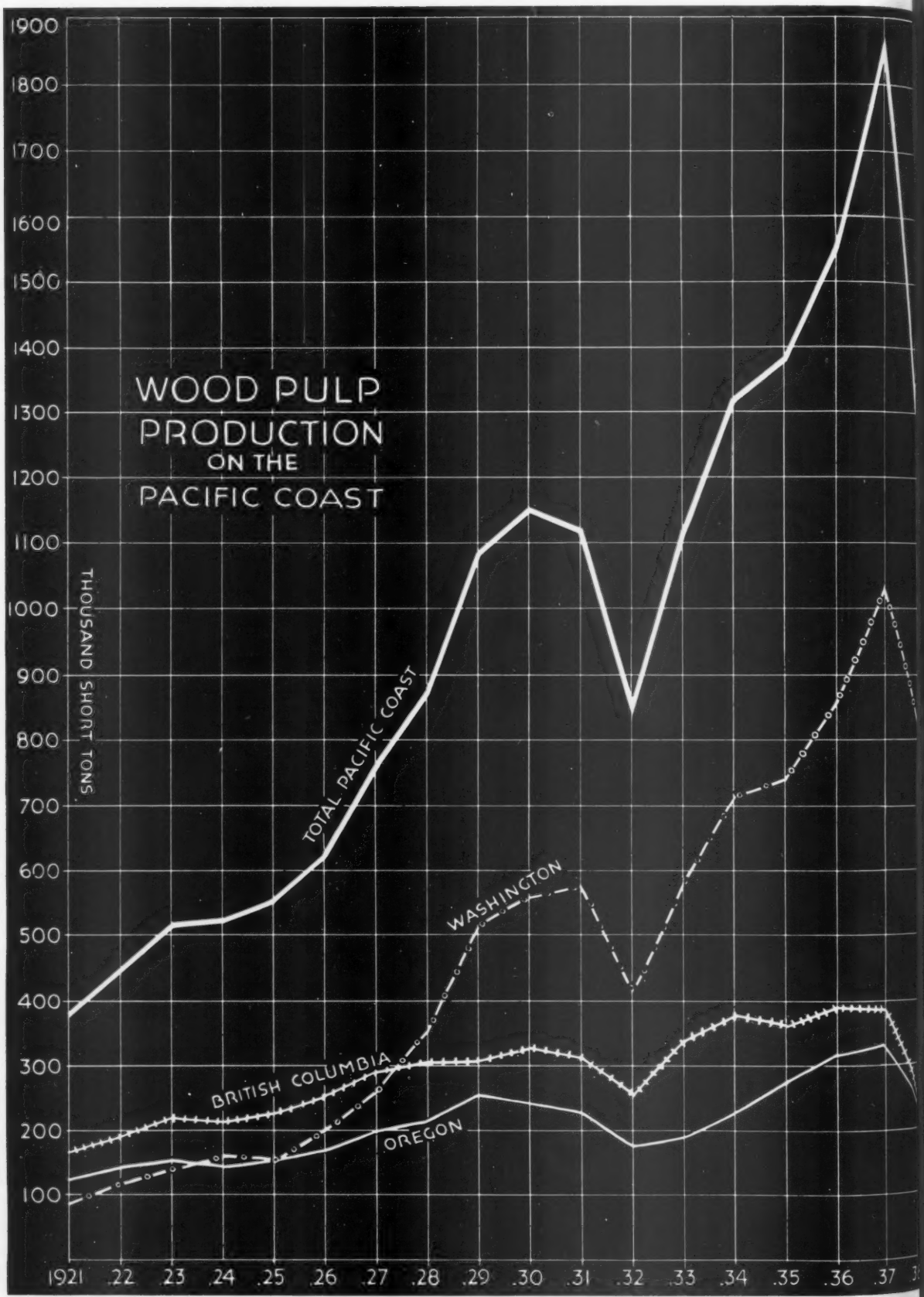
The practice of "marrying" contracts was applied with probably a majority of paper mills that could not use during 1938 the pulp contracted for from abroad. The arrangements would vary but essentially the marrying consisted of an agreement by the foreign pulp producer not to insist on fulfillment of the 1938 contract at the high prices (contracts made in 1937 for 1938 delivery) providing the buyer would agree to take an additional tonnage, usually an equal amount, in 1939. The American buyer either would be relieved immediately of the high price on what pulp he could use in 1938 by agreeing to a normal price for 1939 tonnage (say $50 for bleached sulphite) or he could pay the high contract price (probably $70 for bleached sulphite) for the pulp he took in 1938 and receive a sufficiently low price on the 1939 tonnage which would average out to $50 for the two years. These figures may not be exact but they serve to show how the foreign pulp contracts were kept in effect and how they contributed to the chaotic pulp market that developed in 1938.

To keep their own converting paper mills in a competitive position the American pulp mills had to meet these foreign prices.

Throughout the summer of 1938 the pulp situation was in a constant flux. By August the foreign prices had declined further so it was necessary for the Americans to reduce the price of domestic bleached sulphite to $50 and unbleached to $40 ex dock Atlantic ports. Paper prices were sliding downward and the mills buying pulp were not finding it difficult to buy pulp out of storage at concessions from the stated prices.

No American pulp mill selling pulp, nor American paper mill buying pulp knew for sure whether its selling or buying price was competitive.

Paper prices had been going down although the paper and paperboard production was steadily rising. The weekly production ratio reports of the American Paper & Pulp Association were showing an almost


WOOD PULP
PRODUCTION
ON THE
PACIFIC COAST
THOUSAND SHORT TONS
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
TOTAL PACIFIC COAST
WASHINGTON
BRITISH COLUMBIA
OREGON
1921
.22
.23
.24
.25
.26
.27
.28
.29
.30
.31
.32
.33
.34
.35
.36
.37

steady rise in the operation of paper mills. Yet the prices of paper were tending downward largely because of the varying prices being paid for wood pulp and to the uncertainty as to whether pulp prices had actually reached bottom.

The British pound has been showing weakness in relation to the dollar and after the Czechoslovakian crisis late in September its value steadily declined to a low of $4.62 in early January, 1939. Since the Scandinavian currencies are tied to the pound sterling they declined in relation to the dollar, too, and the producers of pulp in those countries were given an artificial advantage over the American producers of about $3.00 per ton (see "Unbalanced Foreign Exchange Affecting Employment in American Wood Pulp Industry," pages 5-10, January, 1939, issue).

The foreigner's advantage was promptly applied to get all the available American pulp business at still lower prices, prices which meant losses to the American mills.

At the time of acquisition of the Sudetenland by Germany some shipments of wood pulp from mills in that region were on the way to this country, and they were immediately sold at prices lower than even the lowest quoted by the Scandinavian producers. While this tonnage was not large, it was sufficient to further demoralize the pulp market as the year closed.

● On the bright side, inventories were reduced, particularly the inventories of the American pulp

PACIFIC COAST WOOD PULP PRODUCTION—1925-1938

Pacific Coast States and British Columbia
(Tons of 2,000 lbs.)

	1925 Tons	1926 Tons	1927 Tons	1928 Tons	1929 Tons	1930 Tons	1931 Tons
Washington	161,858	199,164	268,349	349,107	523,948	566,137	580,016
Oregon and California	160,736	178,841	200,869	213,407	256,546	248,952	237,532
British Columbia	230,733	259,504	296,253	310,961	304,619	335,429	310,029
Total Pacific Coast	**553,327**	**637,509**	**775,471**	**873,475**	**1,085,113**	**1,150,518**	**1,127,577**

	1932 Tons	1933 Tons	1934 Tons	1935 Tons	1936 Tons	1937‡ Tons	1938‡ Tons
Washington	420,529	583,770	709,380	775,722	895,797	1,163,682	814,695
Oregon and California	187,133	189,332	240,167	262,221	302,634	337,139	236,525
British Columbia	259,586	343,897	383,818	377,522	416,433	425,558	249,000
Total Pacific Coast	**867,248**	**1,117,999**	**1,333,365**	**1,415,465**	**1,614,864**	**1,926,379**	**1,300,220**

Source—U. S. figures up to and including 1933, from U. S. Dept. of Commerce, Bureau of Census; B. C. figures from Dept. of Lands, Forest Branch; and Dominion Bureau of Statistics.

‡ Figures based upon United States Pulp Producers Association total for Oregon and Washington, excepting soda pulp Addition of soda pulp production and division of products between Oregon and Washington estimated by Pacific Pulp & Paper Industry. No wood pulp production in California.

PULP WOOD CONSUMPTION—1925-1938

Pacific Coast States and British Columbia

	1925 Cords	1926 Cords	1927 Cords	1928 Cords	1929 Cords	1930 Cords	1931 Cords
Washington	241,150	305,787	455,664	651,657	956,132	1,000,001	1,025,878
Oregon and California	209,349	232,989	267,233	308,264	340,745	351,053	319,876
British Columbia*	284,100	318,500	364,000	383,008	352,444	373,397	363,688
Total Pacific Coast	**734,599**	**857,276**	**1,076,899**	**1,342,929**	**1,649,321**	**1,724,451**	**1,709,442**

	1932 Cords	1933 Cords	1934 Cords	1935 Cords	1936 Cords	1937‡ Cords	1938‡ Cords
Washington	688,326	1,094,852	1,203,516	1,324,356	1,509,340	1,978,239	1,384,982
Oregon and California	265,470	241,841	322,287	369,327	423,839	505,708	354,788
British Columbia*	304,185	375,450	428,287	421,393	452,143	465,478	273,900
Total Pacific Coast	**1,257,981**	**1,712,143**	**1,954,092**	**2,115,076**	**2,385,322**	**2,949,445**	**2,013,670**

Source—U. S. figures from U. S. Dept. of Commerce, Bureau of Census; B. C. Figures from Dept. of Lands, Forest Branch; and Dominion Bureau of Statistics.

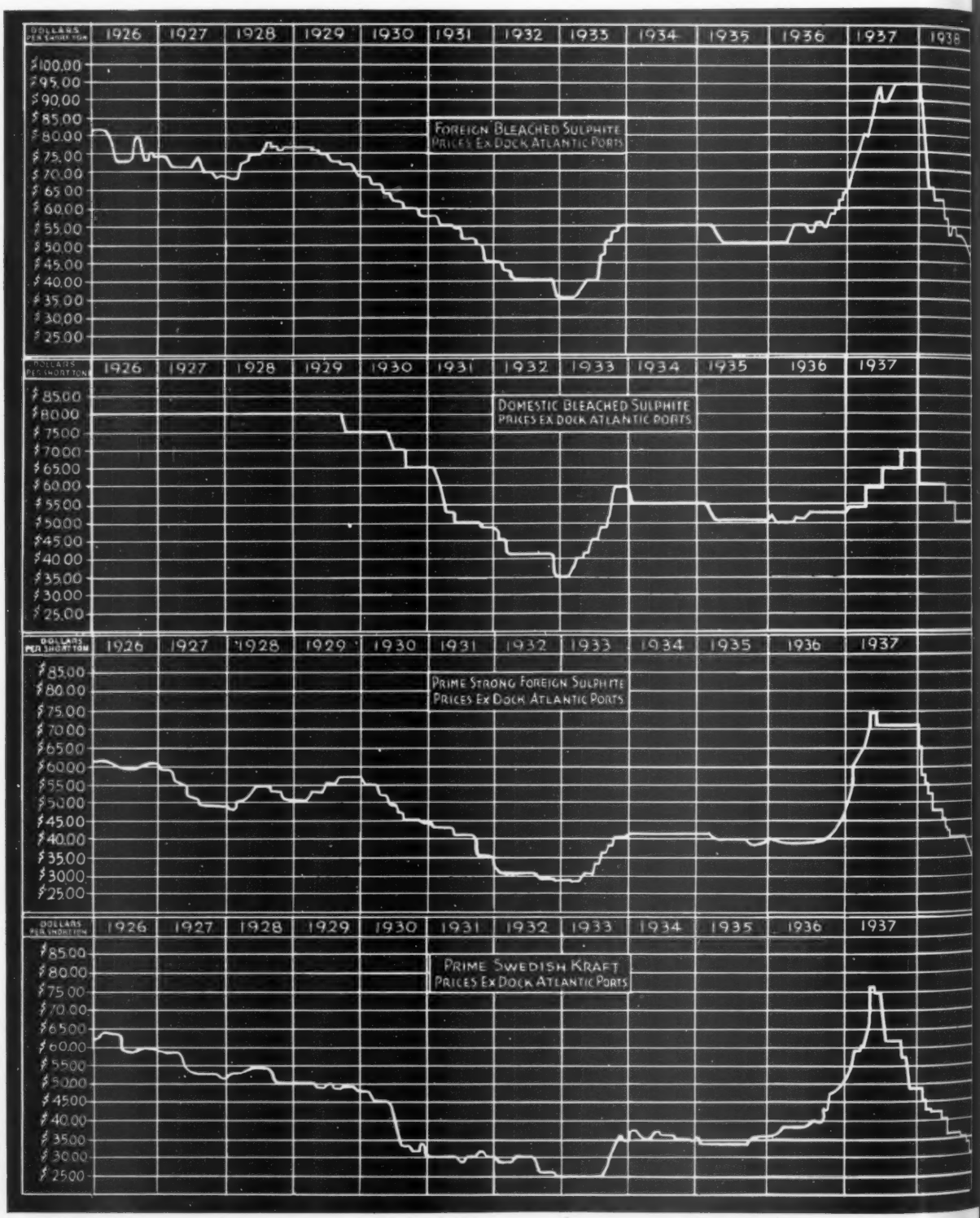
*British Columbia figures prior to 1928 are not shown separately and are estimated on basis of 1.23 cords of wood consumed per ton of wood pulp produced.
‡Estimated.

PACIFIC COAST STATES
and British Columbia
Paper Production
(Tons 2,000 lbs.)

State—	1932	1933	1934	1935	1936	1937	1938
Washington	343,222	381,997	418,115	465,708	506,579	533,000‡	479,700‡
Oregon	182,789	197,970	220,684	242,085	262,478	276,000‡	248,400‡
California	139,297	167,033	169,709	221,763	265,662	280,000‡	252,000‡
British Columbia	228,075	260,599	299,502	299,816	320,555	320,920	219,000
Total Coast Production	893,383	1,007,599	1,108,010	1,229,372	1,355,274	1,409,920	1,199,100

Bureau of the Census, Dept. of Commerce. British Columbia figures from the Dept. of Lands, Forest Branch.
‡1937 Washington, Oregon and California production estimated on basis of national average increase over 1936 production.
‡ 1938 Washington, Oregon and California production estimated on basis of national average decrease from 1937 production

Wood Pulp Price Trends—1926-1938



mills, although they were still large enough to exert pressure on the market toward the end of the year. Paper production had risen from a low of 63.9 per cent of capacity in January to a high of 82.5 per cent in October and ended the year with 74.4 per cent for December.

Paper manufacturers were using more pulp and in view of the drastic curtailment of production by selling pulp mills in the United States, in Canada and some curtailment in Scandinavia, the underlying factors appeared to be working for betterment in the pulp market. Prices were so low that it was believed the Scandinavian producers were losing money even with their $3.00 currency advantage.

There was still one hurdle to clear before the American pulp mills could increase their sales to domestic producers. That was the matter of the "married" contracts which carried over into 1939. Many of these so tied up the buying paper mills that they could not purchase their usual proportion from American pulp mills, for the balance of unused tonnage from 1938 plus the tonnage contracted for 1939 to bring the price down, supplied them with all they could use.

However, again on the bright side, a number of these converted contracts are beginning to expire as this is written in May, 1939, and more will run out in each succeeding month of 1939. American pulp mills are already running better than in the first quarter of the current year and have prospects for more normal operation during the last half. BUT, prices are still very low and unsettled. Even capacity operations the balance of the year will not permit American pulp mills to show a profit that is worthy of the name. As long as the pulp market is unsettled, the paper prices will be unsatisfactory.

Adversity, though always unwelcome, frequently brings blessings. In the case of the Coast pulp industry the troublous months of 1938 brought about improvements in processing and in management. Costs had to be reduced to stay in business and they were cut to the bone.

Though costs were reduced the reduction was not at the expense of labor. The wage agreement between the pulp mills and the International Brotherhood of Pulp, Sulphite & Paper Mill Workers, calling for the highest hourly rates paid by the pulp industry anywhere in the world, was automatically renewed on May 31st, 1938, and again in 1939 by reason of neither the unions nor the employers having requested that the agreement be opened.

The workmen in the Pacific Coast pulp mills have stood loyally by the mills fully realizing that the managements were doing their utmost to operate as much as possible in the face of a worldwide business depression. The West Coast industry's amicable relationship with its workmen during a period trying on the nerves of both, should be considered as a definite gain in human relationship.

● The paper and board mills on the West Coast operated at a good rate during 1938 although the bank of orders was never very high. It was always hand-to-mouth operation but the year end review shows the total was good. Exact figures are not available for Coast paper and board mills but it is generally accepted that their average for the year was considerably above the 72.3 per cent of capacity which was the average for the United States paper industry and the 61 per cent average for the paperboard industry.

As mentioned before paper and paperboard prices declined during 1938 although production ratios rose month by month. Prices were generally considered unprofitable but the more efficient mills managed to come out in the black at the end of 1938.

Mills were kept in good operating condition but improvements, many of which would have reduced costs, were not as numerous as they would have been had prices been a little better. It might be said that the paper and board mills of this region consolidated their positions, reduced costs and improved methods and processes without expending large sums of money.

But planning for improvements continued and when prices are definitely on the upgrade and the order files a little fatter, most all Coast paper and board mills will take out the blueprints and cost estimates and go to work.

The paper and board mills, like the pulp mills, continued their amicable relations with the two unions, the International Brotherhood of Paper Makers and the International Brotherhood of Pulp, Sulphite & Paper Mill Workers, and the working agreements made in May, 1937, remained unchanged throughout 1938 and will continue until May 31st, 1940.

WOOD PULP PRICES IN U. S.

Year—	Domestic Bleached Sulphite	Foreign Bleached Sulphite	Foreign Strong Sulphite	Swedish Kraft	Domestic Bleached Soda
1928	$80	$68 –$78	$48–$55	$50 –$55	.....
1929	75– 80	68 – 77	50– 56	47 – 50	.....
1930	65– 75	57 – 68	42– 56	30 – 47	.....
1931	45– 65	43 – 57	32– 43	28 – 31	.....
1932	35– 45	35 – 43	27– 32	25 – 30	.....
1933	35– 60	35 – 57	27– 43	25 – 37	$40–$50
1934	55– 60	55 –	42–	33 – 38	50
1935	50– 55	50 – 55	37– 42	33 – 36	50
1936	50– 53	50 – 65	38– 50	36 – 50	50– 54
1937	54– 70	65 – 95	50– 75	47 – 76	54– 65
1938	60– 50	90 – 50	70– 36.50	47.50– 31.50	58– 51
Monthly price movement, 1938—					
January	$60	$90 –$77.50	$70 – 57.50	$47.50	$58
February	60	77.50– 65	57.50– 52.50	47.50– 43	58
March	60	65 – 62.50	52.50– 47.50	43 – 42.50	58
April	60	62.50	47.50	42.50	58
May	60	62.50– 57.50	47.50– 45	42.50– 40	58
June	60–$55	57.50– 52.50	43.50– 40	40 – 36	58–$54
July	55	52.50– 55	40	36	54
August	55– 40	55 – 52.50	40	36	54– 51
September	40	52.50	40	36 – 35	51
October	40	52.50	40	35	51
November	40	52.50	40	35	51
December	40	52.50– 50	40 – 36.50	35 – 31.50	51

Pulp Production Declined 29%

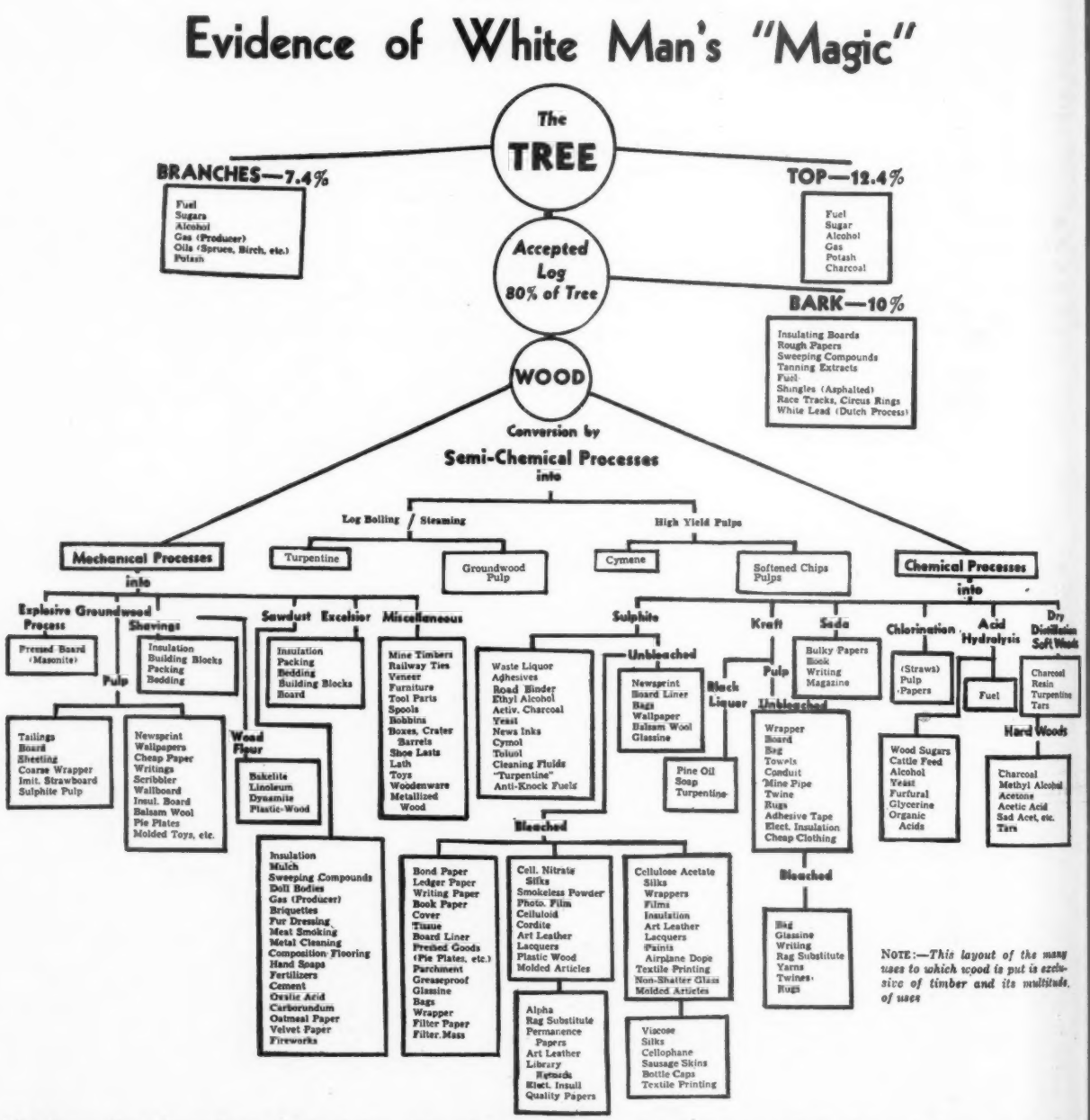
● The production of all grades of wood pulp by U. S. Pacific Coast mills both for own use and for sale amounted to 1,036,220 tons in 1938, reduction of 429,601 tons or 29.3 per cent from the 1937 record of 1,465,821 tons. Including British Columbia production the 1938 total

was 1,300,220 tons, a decline of 626,159 tons or 32.5 per cent.

Washington produced an estimated 814,695 tons of all grades of wood pulp against 1,163,682 tons in 1937. Production is 1938 was 348,987 tons or 30.8 per cent. Oregon in 1938 produced an estimated total of all grades of wood pulp of 236,525 tons while in 1937 the estimated production was 337,139 tons. The 1938 decline amounted to 100,614 tons or 29 per cent. (The Washington and Oregon production figures for 1937 and 1938 are estimated divisions of the total for the two states as released by the United States Pulp Producers Association. They are corrected for the odd numbered years when the Census for Pulp and Paper Manufactures by States is released by the Bureau of Census. The 1937 census data was not yet available at the time of going to press.)

British Columbia pulp production, all grades, in 1938 totaled 249,000 tons as compared to 425,558 tons in 1937. The reduction was 176,558 tons or 41.4 per cent, according to the tonnage figures released by the British Columbia Department of Lands, Forest Branch.

Washington's wood pulp production of 814,695 tons in 1938 was 81,102 tons less than the 1936 production of 895,797 tons, but 38,973 tons



The large list of products derived from the chemical and mechanical processing of wood shows at a glance the importance of wood, exclusive of its structural uses, in our present day civilization ✓ ✓ ✓ This chart is reproduced with acknowledgement to The FINANCIAL POST of Toronto, Canada, in whose issue for September 24, 1938, it originally appeared.

more than the 1935 production of 775,722 tons. In other words, Washington's pulp production in 1938 was larger than all previous years except 1936 and 1937.

Oregon's wood pulp production in 1938 of 236,525 tons was 66,109 tons less than the 1936 production of 302,634 tons; 25,696 tons less than the 1935 total of 262,221 tons; and, 3,642 tons less than the 1934 total of 240,167 tons. But it exceeded the 1933 total of 189,332 tons by 47,193 tons.

British Columbia's wood pulp production of 249,000 tons in 1938 was less than any year since 1925 when the production was 230,733 tons.

Coast Mills Produced 19% Of All U. S. Pulp

● The pulp mills in Oregon and Washington produced 19 per cent of all the wood pulp produced in the United States in 1938 according to the United States Pulp Producers' Association data. In 1937 the percentage was 24.6 per cent and in 1936 22 per cent. The West Coast mills produced 34.5 per cent of all the sulphite produced in the United States last year as compared with 40.8 per cent in 1937, 38 per cent in 1936 and 36 per cent in 1935.

Of the sulphate pulp produced during 1938 the Pacific Coast mills turned out 10 per cent against 12.1 per cent in 1937 and 10 per cent in 1936. While the South expanded its production from 66.25 per cent of the total in 1936 to 75.9 per cent in 1937 and to 81 per cent in 1938, the sulphate production declined in the Lake States from 19.25 per cent in 1936 to 12 per cent in 1937 and to 9 per cent in 1938; and the production of sulphate pulp in the Middle Atlantic states disappeared, the Pacific Coast held its own.

In the production of groundwood pulp the West Coast held 17.5 per cent of the total in 1938 against 20 per cent in 1937 and 18 per cent in 1936.

Of the 1,000,000 tons of bleached sulphite pulp produced in the United States during 1938 the Pacific Coast manufactured 30.6 per cent or 306,306 tons. This was a drop of 224,423 tons or 42 per cent from the 530,729 tons by West Coast pulp mills in 1937. In 1937 the Pacific Coast produced 38.4 per cent of the country's total bleached sulphite production of 1,380,000 tons.

In the production of unbleached sulphite in 1938 the Pacific Coast mills held 39.4 per cent or 248,336 tons out of a total of 630,000 tons. The 1937 Pacific Coast unbleached sulphite production of 355,113 tons was 44.9 per cent of the United States total of 790,000 tons. The Pacific Coast produced 106,777 tons of unbleached sulphite pulp less in 1938 than in 1937 or 30 per cent less.

Coast Paper Production Declined 10%

● The production of paper and paper board in Washington, Oregon and California declined ap-

UNITED STATES
WOOD PULP PRODUCTION BY REGIONS—1938

Source—United States Pulp Producers Association
(Tons of 2,000 Pounds)

Region	Total All Grades	Total Sulphite	Bleached Sulphite	Unbleached Sulphite	Total Sulphate	Bleached Sulphate	Unbleached Sulphate	Ground-Wood	Off-Quality
West Coast	1,036,220	554,642	306,306	248,336	241,588	52,440	189,148	233,872	6,118
New England	866,810	382,500	241,612	140,888	.....	.....	[2]	484,310	.....
Middle Atlantic	423,875	178,790	77,883	100,907	.....	.....	.....	245,085	.....
Lake States	1,006,023	478,772	338,903	139,869	215,708	41,000	174,708	306,008	5,535
South	2,242,072	.....	35,296	[1]	2,012,704	231,560	1,781,144	55,725	138,347
Totals[3]	5,575,000	1,594,704	1,000,000	630,000	2,470,000	325,000	2,145,000	1,325,000	150,000

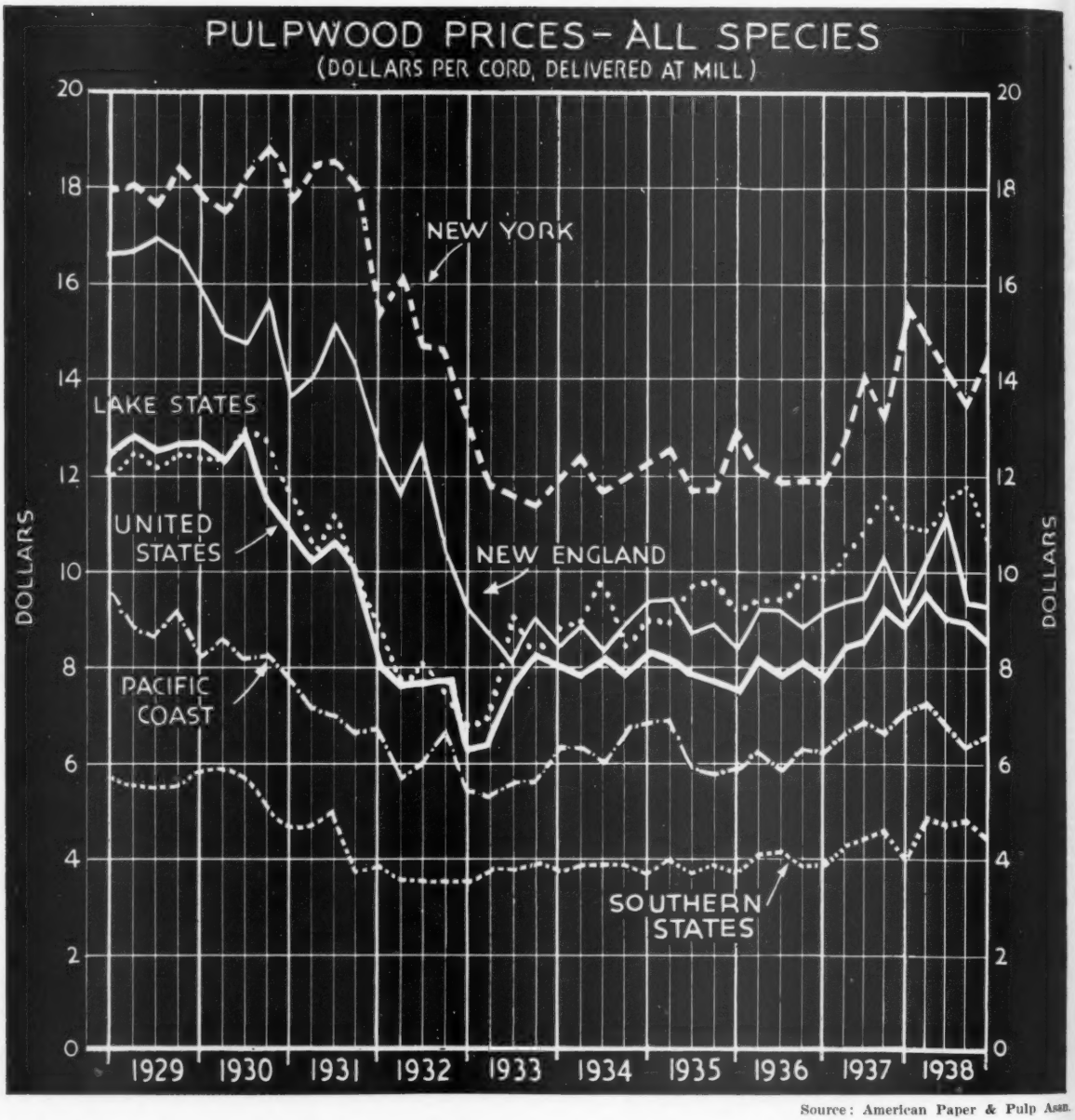
[1] Included in Middle Atlantic States to avoid disclosing individual mill's data.
[2] Included in Lake States to avoid disclosing individual mill's data.
[3] Does not include Soda Pulp. (About 15,000 tons of soda pulp was produced on the Pacific Coast in 1938.—Editor)
Source: As reported to the United States Pulp Producers Association by 90 per cent of the industry and estimated for 10 per cent.

●

REGIONAL PERCENTAGES OF UNITED STATES WOOD PULP PRODUCTION
Total and by Grades in 1936, 1937, and 1938

	Sulphite			Sulphate			Groundwood			Total		
Region.	1936	1937	1938	1936	1937	1938	1936	1937	1938	1936	1937	1938
New England	23.3%	24.0%	23½%	(1)	(1)	(1)	42.5%	39.4%	36½%	21.5%	18.9%	16%
Middle Atlantic	12.8%	9.2%	11%	4.5%	0%	0%	21.5%	16.4%	18½%	13.5%	7.7%	8%
Lake States	23.3%	23.0%	29%	19.25%	12%	9%	18%	21.2%	23½%	19%	19%	18%
South	2.6%	3.0%	2%	66.25%	75.9%	81%	(2)	3%	4%	24.5%	30%	39%
West Coast	38%	40.8%	34½%	10%	12.1%	10%	18%	20%	17½%	22%	24.6%	19%
Total (3)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: As reported to the U. S. Pulp Association by 90 per cent of the industry and estimated for the remaining 10 per cent, for 1938.
(1) So as not to disclose individual mill's operations the production for 1936 is included in Middle Atlantic States and for 1937 and 1938 in the Lake States.
(2) Same as above.
(3) Total of above grades only. Does not include soda pulp, damaged, off-quality and miscellaneous grades of pulp.



Source: American Paper & Pulp Asn.

proximately 10 per cent in 1938 below 1937, from 1,089,000 tons to 980,000 tons based on estimates using the national average decrease which may prove to be too large a decrease for the Coast mills when census data becomes available.

Including British Columbia the decrease in 1938 paper and paperboard production was 210,820 tons, from 1,409,920 tons to 1,199,100 tons, or 14.9 per cent. The larger decline of paper production in British Columbia than in the Pacific States was due to the severe curtailment of newsprint manufacturing which constitutes the greater part of the province's paper capacity.

Association Programs in 1938

• During 1938 the Pacific Section of TAPPI and the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association carried on their educational work in the industry and continued to provide the opportunity for discussion among the men in the industry.

The Superintendents held two meetings during 1938. The Spring meeting in Portland, Oregon, June 3rd and 4th, was a joint one with the Pacific Section of TAPPI. The Winter meeting in Seattle on December 2nd and 3rd was held by the Superintendents Association.

At the June meeting in Portland the following papers were presented: "Measurement of Incrustant Removal from Cellulose Fibers," by George Schmidt of the Pennsylvania Salt Manufacturing Company of Washington, Tacoma; "The Uses of Starches in the Paper Industry," by Jerome Strasser of the Stein, Hall Manufacturing Company, Chicago; "Past and Present Picture in the Pulp and Paper Industry", by Everett Barton, Pulp Division, Weyerhaeuser Timber Company, Longview.

In December at the Seattle meeting four superintendents presented the following papers: "An Outline of Sulphate Pulping", by Norman

A. Lewthwaite, pulp mill superintendent of the National Paper Products Company, Division of Crown Zellerbach Corporation, Port Townsend, Washington; "Some Problems of a Sulphate Pulp Mill Superintendent," by Niles Anderson, assistant superintendent St. Regis Kraft Company, Tacoma.

E. W. G. Cooper, assistant paper mill superintendent of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation's Camas, Washington, mill, gave a paper on, "A Comparison of Kraft and Sulphite on the Paper Machine"; Anton Siebers, paper mill superintendent for the Longview Fibre Company of Longview, Washington, presented a paper entitled, "Recent Improvements on Cylinder Board Machines."

• As for several years past the Pacific Section of the Technical Association of the Pulp and Paper Industry, familiarly known as TAPPI, devoted its efforts primarily to the seven monthly dinner meetings, although the association held a joint meeting in June with the Superintendents.

To develop the preparation of papers among mill operators and technical men, especially among the younger men, the Pacific Section inaugurated a contest and offered a prize of $50 for the best all-around paper presented at one of the seven dinner meetings. The prize is to be known as the Shibley Award to honor the memory of the late Kenneth Shibley, who was an active member of TAPPI and who suggested the contest idea prior to his death in May of 1937.

Papers entered in the contest for the Shibley Award are judged on the following points: 1. The amount of interest shown at the meeting where the paper is presented; 2. Presentation; 3. Technical value. The officers and executive committee of the Pacific Section serve as judges.

During the first year of the contest (1938-1939) five papers were entered in competition for the Shibley Award of $50. The winner will be chosen from among the following papers and the prize awarded at the Joint Meeting of TAPPI and the Superintendents Association in Tacoma June 3rd, 1939: "Investigation of the Sources and Characteristics of Dirt in Bleached Sulphate Pulp," by Robert M. Kuhn, St. Regis Kraft Company, Tacoma; "The Meta-Bisulphite Method for Determination of Residual Chlorine," by A. Orup and R. I. Thieme of the Soundview Pulp Company, Everett; "A New Method of Pulp Testing Control, The Morden Tester," by Claude Christensen of the Camas mill, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation; "A Discussion of the Operation of Photo-Electric Consistency Controllers," by L. A. Wendt of the Everett mill, Pulp Division, Weyerhaueser Timber Company; and, "Various Percentages and Beating of Sulphite Pulp in Mixtures with Groundwood Pulp for Newsprint," by John Howarth Bardsley of the Powell River Company, Powell River, B. C.

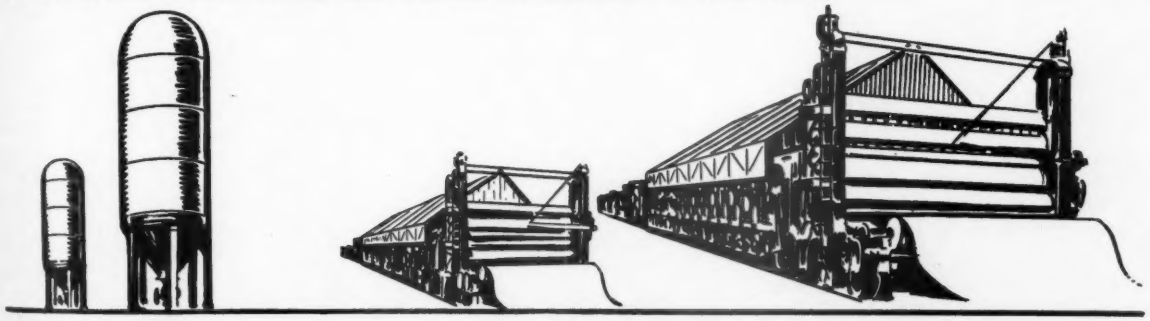
In addition to the above papers the following were presented at the TAPPI dinner meetings during the year 1938-1939: "Some Gas Cleaning Problems in the Pulp and Paper Industry," by Evald Anderson, technical director of the Western Precipitration Company of Los Angeles; "The Fair Labor Standards Act of 1938 and Other Social Security Legislation," by Otto A. Hartwig, adviser and consultant on unemployment compensation and social security problems to the Crown Zellerbach Corporation and Rayonier Incorporated.

"Specific Heats and Boiling Temperatures of Sulfate and Soda Black Liquors," by Dr. K. A. Kobe and Arvin J. Sorenson of the Department of Chemistry and Chemical Engineering, University of Washington, Seattle; "Paper Schools—Their Organization and Conduct," by W. R. Barber, technical director of the Crown Zellerbach Corporation, Camas; "Vocational Education for Pulp and Paper Mills," by George H. McGregor, superintendent of the Longview mill, Pulp Division, Weyerhaeuser Timber Company.

"Can Technical Men Contribute to Good Human Relations," by A. R. Heron, director of Industrial relations, Crown Zellerbach Corporation and Rayonier Incorporated; "Trends and Developments in the Manufacture of Ceramic Products for Industrial Use," by J. Gordon Adderson, assistant superintendent, Gladding, McBean & Company, Renton, Washington.

Besides the above papers, several informal talks were given at the dinner meetings. In October Dr. H. K. Beson, executive officer of the Department of Chemistry and Chemical Engineering, University of Washington, spoke on his European trip from which he had just returned. Dr. Benson outlined research work in Europe on cellulose. At the same meeting Curt Rosenblad of Stockholm, Sweden, spoke on the heat and SO^2 recovery system he has developed. At the April meeting in Camas, W. R. Barber, technical director of the Crown Zellerbach Corporation, outlined, "The Young Man's Opportunity," in the pulp and paper industry.

COMPARATIVE GROWTH
Of PACIFIC COAST PULP and PAPER INDUSTRY — 1923-1938



1923 1938 1923 1938

Total Daily Capacity All Grades of Pulp
1923—2,045 tons
1938—7,112 tons. Increase: 248%.

Total Daily Capacity All Grades of Paper and Board
1923—2,056 tons
1938—5,288 tons. Increase: 157%.

PULP AND PAPER CAPACITIES OF PACIFIC COAST MILLS

Showing principal grades manufactured and capacities in tons per 24-hour day

Name of Mill	Location	—PULP—						—PAPER—						REMARKS
		Mechanical	Unbleached Sulphite	Bleached Sulphite	Unbleached Sulphate	Bleached Sulphate	Soda	News	Sulphites	Sulphates	Book	Board	Others	
BRITISH COLUMBIA														
British Columbia Pulp & Paper Co.	Woodfibre			150										Bleached sulphite of rayon and paper grades.
British Columbia Pulp & Paper Co.	Port Alice			150										
Pacific Mills, Ltd.	Ocean Falls	200	75		115			230	20	85				News, Kraft and Sulphite Wrapping, fruit wrap, tissues, etc.
Powell River Co., Ltd.	Powell River	525	115					675						Newsprint, unbleached sulphite pulp, and groundwood pulp.
Sidney Roofing & Paper Co.	Victoria	10										25		Roofing and boards.
Vancouver Kraft Mills, Ltd.	Port Mellon				85									Mill idle.
Westminster Paper Mills, Ltd.	New Westminster								25					Kraft and sulphite wrapping; second sheets; fruit wraps; tissues; specialties.
WASHINGTON														
Berkheimer Mfg. Co., J. E.	Tacoma												12	Rag roofing, etc.
Columbia River Paper Mills	Vancouver	30		110					110					Unbleached and bleached sulphite and groundwood papers; wrapping; newsprint; fruit wraps; tissues.
Crown Willamette Paper Co. (Division of Crown Zellerbach Corp.)	Camas	90	250	100	160	‡			240	160				Sulphite, sulphate and groundwood specialties, tissue, M. F. book, etc.
Everett Pulp & Paper Co.	Everett						60				65			Book, railroad, writing, school supplies,
Everett Pulp & Paper Co.	West Tacoma										35			Products same as Everett mill (idle).
Fibreboard Products, Inc.	Port Angeles	30	72									100		Box and container board, pulp board.
Fibreboard Products, Inc.	Sumner											75		White patent coated board, bottle cap bd.
Grays Harbor Pulp & Paper Co.	Hoquiam								50					Box and container board, coated board.
Rayonier Inc., Grays Harbor Division	Hoquiam			270										Sulphite bonds, writing, specialties.
Inland Empire Paper Co.	Millwood	100	33					65	50					Rayon and paper grades.
Longview Fibre Co.	Longview	100			200	‡				125		200		News, wrapping, poster, sulphite specialties, etc.
National Paper Products Co. (Division of Crown Zellerbach Corp.)	Port Townsend				280					265				Board, wrapping, bags, container, boxes.
Rayonier Inc., Port Angeles Division	Port Angeles			250										Kraft liner board, wrapping, bag paper.
Pacific Coast Paper Mills	Bellingham								15					Rayon and paper grades.
Pacific Straw Paper & Board Co.	Longview	30										60		Toilet Tissues, Towels, etc.
Rayonier Inc., Shelton Division	Shelton			340										All kinds of boards.
Soundview Pulp Co.	Everett			470										All Rayon grade, includes 140 tons produced by Tacoma Division.
Puget Sound Pulp & Timber Co., Fidalgo Division	Anacortes		80											Mill idle.
Puget Sound Pulp & Timber Co., San Juan Division	Bellingham		240											
Rayonier Inc., Tacoma Division	Tacoma		140											Entire output bleached and dried at Shelton. Mill idle.
St. Regis Kraft Co.	Tacoma					175								
Tumwater Paper Mills Co.	Tumwater	(20)							(50)					Mill idle.
Washington Pulp & Paper Corporation (Division of Crown Zellerbach Corp.)	Port Angeles	290	60					350						Newsprint.
Weyerhaeuser Timber Co.	Longview			210										
Weyerhaeuser Timber Co.	Everett		230											
OREGON														
Crown Willamette Paper Co.	Lebanon		37						44					Wrapping, cartridge, powder, printed wrapping and semi-parchmentized wrappings.

Weyerhaeuser Timber Co.	Everett		230											

OREGON														
Crown Willamette Paper Co. (Division of Crown Zellerbach Corp.)	Lebanon		37						44					Wrapping, cartridge, powder, printed wrapping and semi-parchmentized wrappings.
Crown Willamette Paper Co. (Division of Crown Zellerbach Corp.)	Oregon City	60												
Crown Willamette Paper Co. (Division of Crown Zellerbach Corp.)	West Linn	440	110					300	25				45	News, Wrapping, Poster, Sulphite specialties.
Fir-Tex Insulating Board Co.	St. Helens												*	Wood fibre insulating board. Daily capacity 250,000 sq. ft.
Lloyd A. Fry Roofing Co.	Portland													Asphalt roofing, roofing felts. Plant to be constructed in 1939.
Hawley Pulp & Paper Co.	Oregon City	185	105					150	100					News, Sulphite Wrapping, Lightweight Papers, Tissue, Cover, etc.
Oregon Pulp & Paper Co.	Salem		20	110					120					Sulphite Bonds, Glassine, Greaseproof.
St. Helens Pulp & Paper Co.	St. Helens				150	‡				140				Kraft wrapping, bag, fruit wraps, towels,
Coos Bay Pulp Corporation	Empire		70											Mill adle.
Spaulding Pulp & Paper Co.	Newberg		80											
CALIFORNIA														
California Fruit Wrapping Mills	Pomona								35					Fruit wraps, wrapping, tissues, napkins,
California-Oregon Paper Mills	Los Angeles								40	40				Wrapping, fruit wrap, vegetable parchment, tissues.
Certain-teed Products Corp.	Richmond												38	Roofing, felts, mulching and insulating papers.
Crown Willamette Paper Co.	Floriston													Dismantled.
Fibreboard Products	Los Angeles (Vernon Div.)											150		Box board, container, patent coated board, bristol, bottle cap, etc.
Fibreboard Products	Stockton											250		Boxes, cartons, cardboard specialties.
Fibreboard Products	Los Angeles (Sunset Div.)											8		Binder board and miscellaneous board.
Fibreboard Products	Antioch											200		Container board, tag, white patent coated, folding and set-up corrugated straw.
Lloyd A. Fry Roofing Co.	Compton												25	Asphalt Roofing, Roofing Felts.
Johns-Manville Corporation	Pittsburg												30	Asbestos Paper.
El Rey Products Co. (Formerly Los Angeles Paper Mfg. Co.)	Los Angeles												33	Roofing, car lining, industrial flooring.
Pacific Coast Pulp & Paper Co.	Richvale						5							Rice straw pulp produced by special process. Not included in soda pulp total.
Paraffine Cos., Inc.	Emeryville												120	Roofing and felts, floor coverings.
Pioneer Division, Flintkote Company	Los Angeles											90	70	Roofing felts and boards, patent coated board, corrugated board, pasted board.
U. S. Gypsum Co.	Los Angeles (Southgate)											70	50	News lined chip board and roofing felts.
COLORADO														
Central Fibre Products Co. Successors to Colorado Pulp & Paper Co.	Denver	15										50		Box, liner, chip boards, wall boards, etc.
HAWAII														
Olaa Sugar Company	Olaa												28	Mulch Paper (Mill Idle).
Hawaiian Cane Products Co.	Hilo													Insulating board from bagasse. (300,000 sq. ft. ½ in. thick per day).
Total daily capacities		2105	1617	2160	990	175	60	1770	874	815	100	1278	451	

Total Pulp Capacity—All Grades **7,112**

Total Paper Capacity—All Grades **5,288**

*Totals do not include 250,000 sq. ft. of insulating board.
Total Pacific Canadian Capacity Pulp, 1,465 tons; Paper, 1,060 tons.
Total Pacific United States Capacity—Pulp, 5,647 tons; Paper, 4,228 tons.
[1]Tacoma Division production not included in unbleached sulphite total.
‡Production of Bleached and Semi-Bleached Sulphate is variable.

The Effect of Depreciated Foreign Currencies On Commodity Prices in the United States

An educational bulletin issued in April by the United States Pulp Producers Association showing graphically the depressing effect of fluctuating foreign currencies on American commodity prices – Although protected by import duties American paper prices rise and fall with pulp prices following the trends of foreign currencies

THE Pound Sterling is the dominant currency in world trade:

(1) because many other countries important in world trade and known as the "Sterling Area", (Note), keep their currencies "pegged" to the pound. In other words, their currencies rise and fall in terms of the dollar to the same extent as the pound.

(2) because London is the market place where the competition of buyer and seller establishes prices in terms of pounds for goods and commodities in much of the world trade.

Therefore the price levels of such goods and commodities in the United States, which is outside of the sterling area, are largely determined by their London prices translated into dollars at the current rate of exchange. (Thus, for example, a commodity selling at 10 pounds per ton in London when the pound exchanges for 5 dollars, would cost in New York approximately $50.00. If the pound exchanges for $4.50 the New York price would approximate $45.00 per ton). It is also true that priies of many domestic products of industry and agriculture, which do not compete directly in world trade, sympathetically rise and fall to some extent with the prices of the internationally competitive commodities.

The exchange rate of the dollar and the pound is of great and fundamental importance in determining our price levels.

If the pound is depreciated in terms of dollars it means that we receive proportionately less in dollars for articles exported to the "Sterling Area". But what is more important to our manufacturers, the depreciation of the pound allows the foreign manufacturer to sell that much lower in the United States in terms of dollars without reducing the price realized in his own currency. In order to meet this competition and hold their customers, the affected industries in the United States must lower prices on their entire output.

● Foreign currency depreciation is generally considered only to affect our foreign trade. But when the pound is depreciated in terms of the dollar, the result of greatest importance is the effect on the internal price levels in the United States. When the depreciation becomes severe, as it was from the autumn of 1931 to the spring of 1933, it can cancel much or all of the tariff on protected articles and create what amounts to a subsidy paid to the foreign manufacturer of competitive articles on the free list. That frequently enables the foreign manufacturer to sell his products in the United States at prices below what it costs the American producer to make them, and depresses industry. Agricultural and primary raw material prices such as copper, pulp, cotton, etc., go down. The resulting falling off in income of those dependent upon the production of these products soon reduces their capacity to buy. Industrial unemployment therefore increases and eventually all industry is adversely affected.

Following the abnormal peaks of 1929, the severe but natural liquidation and deflation had reduced world prices to low levels by the summer of 1931. Then England abandoned a fixed gold value for the pound and allowed the pound to depreciate about 30 per cent in terms of gold and dollars. Countries of the "Sterling Area" followed the pound and some other nations soon followed and depreciated their currencies. A few, Japan and Finland for instance, eventually depreciated much more than the pound. Others promptly imposed countervailing duties, import restrictions and embargoes to neutralize the currency depreciation of their foreign competitors in order to protect their own industries.

The United States took no action.

Some prices in the "Sterling Area" at first advanced, then lost most of the gain and became more or less stabilized, but deflation in that area came to an end and it is important to note that recovery in Great Britain began at that point. Prices in the United States continued downward and there ensued a year and a half of continuous and destructive deflation.

Consideration must also be given to the fact that conditions prevailing in the United States have an important effect on the general level of commodity prices in world markets. Therefore extreme depression in our country served to prolong a low world price level valued in pounds, which in turn was reduced to a much lower dollar value in the United States when exchanged through a pound depreciated 30 per cent. A vicious downward cycle resulted.

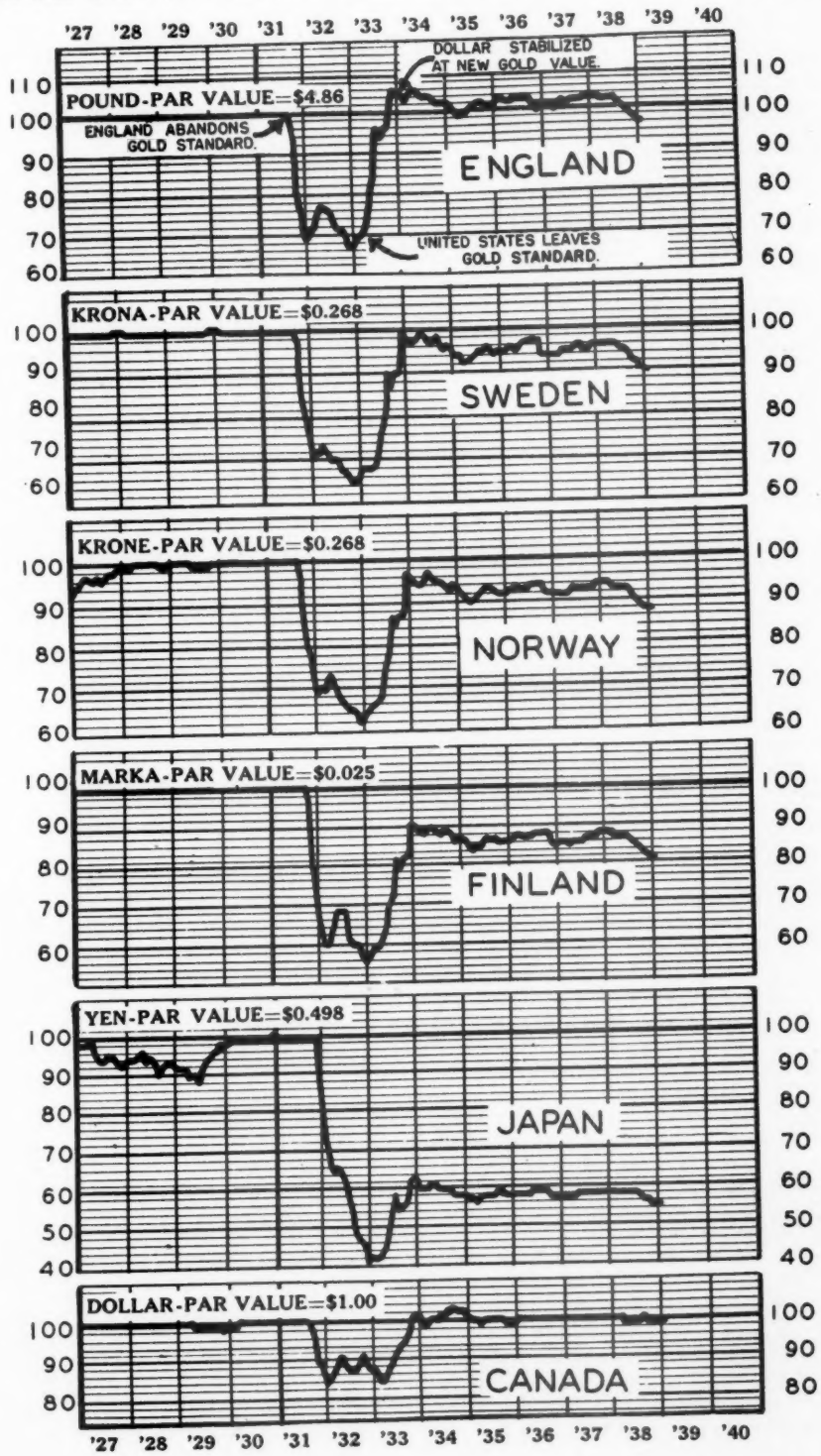
Loss of buying power, unemployment on an unprecedented scale, wage reductions, distress on the farms and in the factories, all were a natural result.

Values, too, were destroyed because agriculture and industry must have prices on an average high enough to produce a profit in order to preserve value for land and property. Eventually the shrinkage in farm and other property values became acute enough to be one of the principal contributing reasons for closing the banks. The correction of the situation, which threatened general bankruptcy and chaos, came when the necessary action was taken in the spring of 1933 to cut loose from the old gold standard, as England did in 1931, and return the dollar to its approximate normal exchange rate to the pound, thus restoring price levels, values and solvency in the United States.

NOTE: The term "Sterling Area" or "Sterling Bloc" is used to designate the countries which habitually keep their currencies at a more or less fixed relationship to the pound. During the 1931-1932-1933-period of pound depreciation the following countries were included in the area: Argentine; Denmark; Egypt; Estonia; Finland; Iraq; Latvia; Lithuania; Norway; Portugal; Sweden; Japan; Uruguay; Siam; South Africa; and all British Empire territories except Canada. These countries are all in the "Sterling Bloc" at the present time.

VARIATIONS IN THE EXCHANGE RATES OF THE POUND AND OTHER FOREIGN CURRENCIES

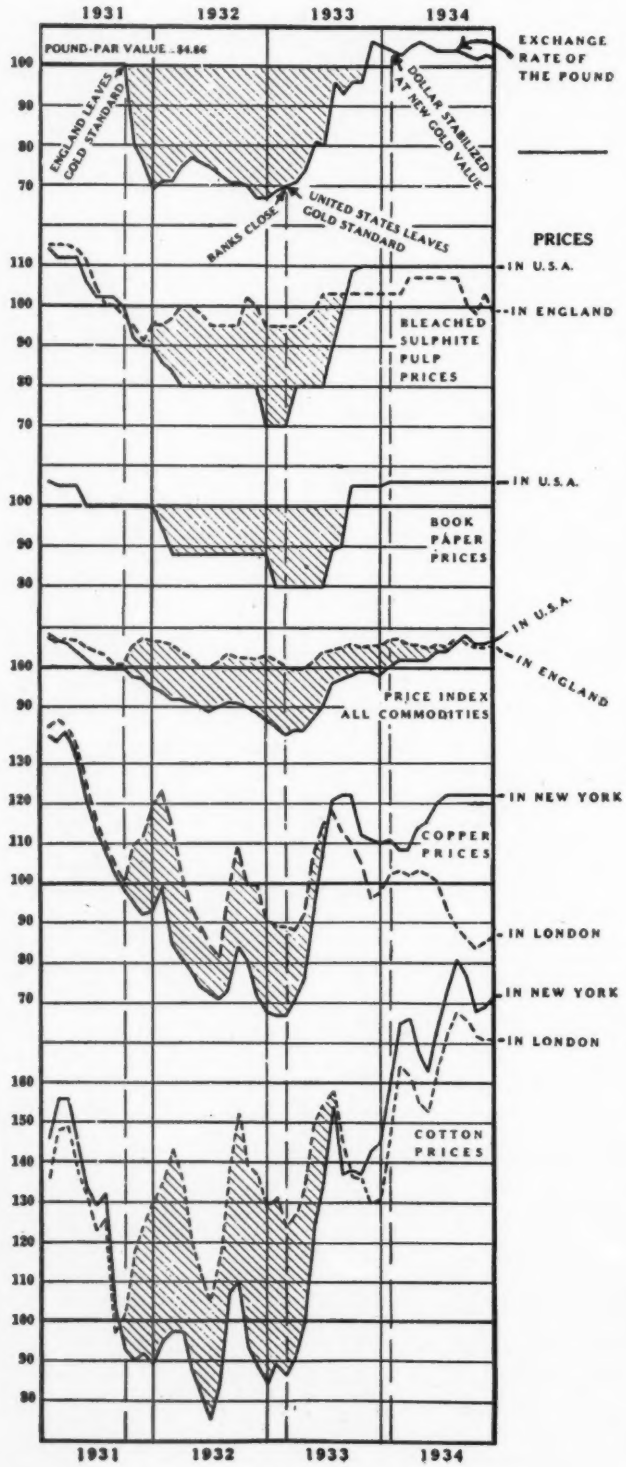
In Per Cent of Their Par Value in Dollars from 1927 to 1939



EXAMPLES OF THE EFFECT OF VARIATIONS IN THE EXCHANGE RATE OF THE POUND ON COMMODITY PRICES IN THE UNITED STATES.

Variation in Exchange Rate in Per Cent of Par = $4.86.

Variation in Prices in Per Cent of Prices Existing Immediately before England left the Gold Standard, Sept. 21, 1931.



● History threatens to repeat itself. Owing to unsettled conditions in Europe during the past year, the Pound Sterling has once more been losing ground in terms of the Dollar and depressed prices of international commodities in the United States, particularly those admitted free of duty, are again reflecting the depreciation of the pound.

From $5.02 in February, 1938, the pound dropped to a low of $4.60 toward the end of the year and was $4.68 April 1st, of the present year, exchanging now for approximately seven per cent less than its dollar equivalent in February, 1938.

What might we expect, then, if another crisis in Europe should cause another severe depreciation of the pound, as it almost did in the latter part of 1938? At present our defense is a temporary arrangement depending on the operation of Stabilization Funds, provided by the Treasuries of Great Britain and the United States, which are used to buy and sell dollars and pounds in the exchange market in order to prevent wide fluctuations in their exchange values. In spite of the use of these Funds, the pound depreciated about 8 per cent in terms of the dollar during eight months of 1938, and the British Stabilization Fund became so depleted in preventing a greater depreciation that a huge transfer of gold by the Bank of England to the Fund Account became necessary, which greatly reduced the gold reserve of the bank. Another European crisis of war might produce a situation where the Fund would be unable to protect the pound. A permanent, effective and automatic defense against foreign currency depreciation is therefore urgently needed.

Such a defense we must also have to prevent "dumping" by foreign manufacturers. "Dumping" means selling below cost of production or at prices which return to the foreign manufacturer a net amount which is less than that received in his home market. Such unfair competition breaks down price levels in the

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These charts show the relationship between the fluctuations in the dollar value of the pound and the dollar prices of commodities in the United States.

When England left the Gold Standard, prices in the United States declined along with the dollar value of the pound. When the United States left the Gold Standard and neutralized the devaluation of the pound, prices advanced along with the dollar value of the pound.

The price trends of particular commodities shown by the charts are given as examples of what happened generally in the United States during this period.

SHADED AREA REPRESENTS THE EXTENT OF:

DEPRECIATION OF THE POUND, in terms of dollars, below the par rate of $4.86, after England left the Gold Standard, Sept. 21, 1931.

DEPRESSION OF PRICES IN THE UNITED STATES below prices prevailing in the world market in England, resulting from the depreciation of the pound.

PRICES IN U. S. A.———————

PRICES IN ENGLAND — — — — — — — — — —

For Schedules of Prices from which percentages were computed for the charts, and the source of the quotations used, see tables.

United States with resulting injury to our own industries. The protection must apply to articles on the free list as well as to dutiable articles, because there are important industries in the United States without tariff protection which are most exposed to the damage resulting from dumping. The expanding area under government by Dictators has created a new and dangerous threat to our industries. Their trade being under government control, subsidized exports are sold by their manufacturers far below cost.

In order to attain a National Income sufficient to produce the necessary taxes and support our standard of living we must have good wages, full employment and prosperous conditions in agriculture and industry. These we cannot have without price levels high enough to produce reasonable profits. Industry and labor must be protected from unfair and low wage foreign competition. Why do we allow our price levels and economic welfare to remain at the mercy of outside foreign influences over which we have no control? Should we not defend ourselves against destructive economic attacks, as we arm ourselves against threat of war?

● Legislation should provide, without delay, countervailing duties on both protected and free articles in competitive trade to neutralize the effects of depreciated foreign currencies. Such action would also remove the incentive for countries to depreciate their currencies for the purpose of obtaining trade advantages.

● Legislation should provide, without delay, effective anti-dumping laws which give immediate protection when violated and should apply to both dutiable and free articles in competitive trade.

● The United States cannot and must not remain defenseless aganist such destructive economic attacks. It is time to act.

CHEMICAL WOOD PULP

● The effect of depreciated foreign currencies on industries whose products are on the free list is here shown in the case of a chemical pulp.

Production of chemical pulp in the U.S.A. for 1938 was 4,650,000 tons, imports were 1,552,000 tons. Most imports come from Norway, Sweden and Finland and, since there is no import duty, keen competition exists with manufacturers in these countries who operate with cheap labor and also have the advantage of low ocean freight rates due to the low wages paid on the foreign ships which carry their products to American ports on the Atlantic and Great Lakes.

The chart of prices records sales of foreign pulp in U.S.A. and England. In 1932 the Scandinavian manufacturer was receiving a higher price when selling in New York at $40 per ton than when selling in 1931 at $50 per ton.

The price of domestic pulp followed the price of imported pulp until the latter was reduced to $35, which was not met by United States producers because they were already selling far below cost at a price of $40. Consequently the percentage of imports increased.

Prices in the United States recovered in 1933 as the dollar value of the pound recovered.

PAPER

● Paper manufacturers in the United States are protected by an import duty on paper. Nevertheless prices declined and recovered with pulp prices, imports increased, and profits in the operation of this important industry largely disappeared or became losses.

Many industries having tariff protection were affected in a similar way by the competition of foreign imports which were offered for sale in our markets at lower and lower prices due to depreciated foreign currencies.

ALL COMMODITY - PRICE INDEX

● A comparison of the index level of commodity prices in England (Standard Statistics) and the United States (Bureau of Labor Statistics), on the basis of 1926 as par in both cases, shows the decline in prices in the United States as compared to England, resulting from foreign currency depreciation; and subsequent recovery when that condition was corrected. It should be noted that prices in England were relatively stabilized during this period.

COPPER

● Copper prices had declined from the highly inflated price of 18 cents per pound, New York, in 1929-30 to 7¼ cents per pound on September 1, 1931, which was below the cost of production for all American producers. But foreign competition under conditions created by a depreciated pound finally drove prices down to the extremely low level of 4⅞ cents by the end of 1932. Prices recovered to 9 cents in

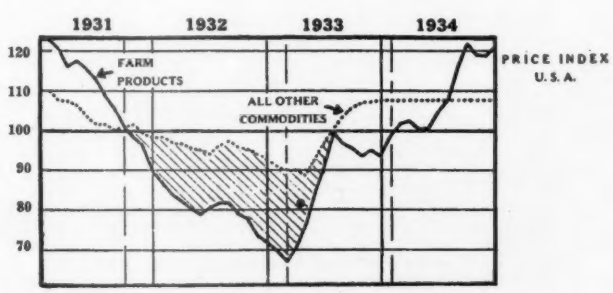
EFFECT OF VARIATIONS IN THE EXCHANGE RATE ON AGRICULTURAL PRODUCTS AS COMPARED TO OTHER COMMODITIES.

● The deflation of world prices during 1930 and 1931 had reduced the prices of farm products to low levels when England left the Gold Standard in September, 1931. Thereafter, prices in the world market quoted in pounds were stabilized, while prices in the United States quoted in dollars continued to decline as the exchange value of the pound declined.

The price decline ended when the United States left the Gold Standard and prices advanced along with the dollar value of the pound.

It should be noted that prices of farm products were affected more than prices of industrial commodities, because our surplus production of agriculture sells at world prices translated into dollars through the pound and other foreign currencies. The price received for the surplus products largely determines domestic prices. Agricultural prices are therefore more sensitive to changes in the dollar-pound exchange rate than industrial prices which have tariff protection. **However, the loss of agricultural buying power seriously added to the depression of industry.**

The advance in agricultural prices during the second half of 1934 was due to drought, resulting in very short crops and higher world prices.



Schedules of Exchange Rates and Prices from Which Percentages Were Computed to Make Price Charts

Exchange Rate of the Pound Sterling in Per Cent of Par Value in Dollars. Par=$4.86.

Source: Computed from Foreign Exchange Rates as quoted in the Federal Reserve Bulletin-Monthly averages of daily quotations based on noon buying rates for cable transfers in New York.

	1930	1931	1932	1933	1934	1935	1936	1937	1938
January	100	100	71	69	104	101	102	101	103
February	100	100	71	70	103	100	103	101	103
March	100	100	75	71	105	98	102	100	102
April	100	100	77	74	106	99	102	101	102
May	100	100	76	81	105	100	102	102	102
June	100	100	75	85	104	101	103	101	102
July	100	100	73	96	104	102	103	102	101
August	100	100	71	93	104	102	103	102	100
September	100	93	71	96	103	101	103½	102	99
October	100	80	70	96	102	101	101	102	98
November	100	76	67	106	103	101	100	103	97
December	100	69	67	105	102	101	101	103	96

LONDON PULP PRICES

Monthly Average Price (C.I.F. U.K. Ports) of Foreign Bleached Sulphite Pulp in £ Per Long Ton

Source: Sales Records of Becker & Co. Ltd., London

	1931	1932	1933	1934
January	12.1	10.0	10.0	10.8
February	12.1	10.2	10.0	10.8
March	12.1	10.5	10.0	11.2
April	12.0	10.5	10.2	11.2
May	11.7	10.3	10.4	11.2
June	11.0	10.0	10.8	11.2
July	10.5	10.0	10.8	11.2
August	10.5	10.0	10.8	11.2
September	10.5	10.0	10.8	10.5
October	10.0	10.7	10.8	10.4
November	9.5	10.5	10.8	10.8
December	10.0	10.0	10.8	10.4

NEW YORK PULP PRICES

Monthly Average Price (Ex Dock New York) of Foreign Bleached Sulphite Pulp in Dollars Per Short Ton

Source: U. S. Pulp Producers Association

	1931	1932	1933	1934
January	57	43	35	55
February	56	42	35	55
March	56	40	40	55
April	56	40	40	55
May	53	40	40	55
June	52	40	40	55
July	52	40	45	55
August	52	40	50	55
September	50	40	54	55
October	46	40	55	55
November	45	40	55	55
December	45	35	55	55

NEW YORK COPPER PRICES

Monthly Averages of Daily Quotations of Electrolytic Copper—Prompt Delivery New York in Cents Per Pound

Source: Standard Statistics

	1931	1932	1933	1934
January	9.90	7.21	4.87	8.06
February	9.83	6.12	4.87	7.87
March	10.02	5.87	5.13	7.87
April	9.57	5.66	5.56	8.27
May	8.81	5.38	6.81	8.37
June	8.18	5.26	7.87	8.70
July	7.80	5.16	8.78	8.87
August	7.40	5.31	8.87	8.87
September	7.13	6.08	8.87	8.87
October	6.89	5.85	8.13	8.87
November	6.67	5.18	8.03	8.87
December	6.72	4.91	8.00	8.87

LONDON COPPER PRICES

Monthly Average Prices of Standard Copper, London, Spot in Pounds Sterling Per Long Ton

Source: Standard Statistics

	1931	1932	1933	1934
January	44.98	39.46	28.52	32.55
February	45.42	36.92	28.48	33.06
March	44.86	33.04	28.22	32.53
April	42.73	29.94	29.59	32.98
May	38.94	28.55	34.12	32.67
June	35.88	26.87	36.61	32.13
July	34.46	26.07	37.83	29.76
August	32.61	31.41	36.11	28.38
September	31.55	34.87	35.15	27.55
October	35.00	31.85	33.60	26.73
November	35.90	31.88	30.66	27.26
December	38.33	29.17	31.19	27.85

BOOK PAPER PRICES

Monthly Average Price (F.O.B. Mill, U.S.A.) of Book Paper in Cents Per Pound

Source: Standard Statistics

	1931	1932	1933	1934
January	5.31	4.69	4.00	5.29
February	5.25	4.38	4.00	5.30
March	5.25	4.38	4.00	5.30
April	5.25	4.38	4.00	5.30
May	5.00	4.38	4.00	5.30
June	5.00	4.38	4.00	5.30
July	5.00	4.38	4.45	5.30
August	5.00	4.38	4.99	5.30
September	5.00	4.38	5.25	5.30
October	5.00	4.38	5.25	5.30
November	5.00	4.38	5.25	5.30
December	5.00	4.38	5.25	5.30

UNITED STATES—INDEX OF ALL COMMODITY PRICES

Bureau of Labor Statistics

Source. Standard Statistics (1926=100)

	1931	1932	1933	1934
January	78.2	67.5	61.	72.2
February	76.8	66.3	59.8	73.6
March	76.	66.	60.2	73.7
April	74.8	65.5	60.4	73.3
May	73.2	64.4	62.7	73.7
June	72.1	63.9	65.	74.6
July	72.	64.5	68.9	74.8
August	72.1	65.2	69.5	76.4
September	71.2	65.3	70.8	77.6
October	70.3	64.4	71.2	76.5
November	70.2	63.9	71.1	76.5
December	68.6	62.6	70.8	76.9

ENGLAND—INDEX OF ALL COMMODITY PRICES

Source· Standard Statistics (1926=100)

	1931	1932	1933	1934
January	72.2	71.4	68.4	71.7
February	71.7	70.8	67.4	72.
March	71.5	69.7	66.7	71.2
April	71.4	68.7	66.8	70.8
May	70.5	67.1	68.	70.4
June	69 7	67.1	69.6	71.
July	69	68.	70.	70.4
August	67 2	69.3	70.4	71.8
September	67	68.6	70.9	71.3
October	70 5	68.7	70.6	70.9
November	71 8	68.5	70.7	70.6
December	71.4	69.	70.7	70.9

NEW YORK COTTON PRICES

Average of Daily Closing Prices Weekly of Cotton, American Middling Uplands, New York, Spot in Cents Per Pound

Source Standard Statistics

	1931	1932	1933	1934
January	10.28	6.65	6.24	11.25
February	10.96	6.85	6.05	12.28
March	10.91	6.85	6.39	12.30
April	10.19	6.17	7.02	11.80
May	9.38	5.73	8.65	11.44
June	9.05	5.27	9.47	12.20
July	9.28	5.88	10.74	12.85
August	7.22	7.48	9.56	13.40
September	6.50	7.70	9.64	13.10
October	6.32	6.57	9.59	12.48
November	6.44	6.22	10.04	12.54
December	6.24	5.95	10.17	12.76

LIVERPOOL COTTON PRICES

Monthly Wholesale Prices of Cotton, American Middling, Liverpool, Spot in Pence Per Pound

Source. Board of Trade Journal, London

	1931	1932	1933	1934
January	5.48	5.43	5.26	5.91
February	5.95	5.73	4.98	6.61
March	5.97	5.48	5.10	6.53
April	5.59	4.86	5.37	6.24
May	5.31	4.52	6.03	6.13
June	4.93	4.23	6.25	6.59
July	5.06	4.68	6.36	6.95
August	3.91	5.60	5.84	7.17
September	4.09	6.13	5.49	7.07
October	4.72	5.59	5.48	6.93
November	4.97	5.51	5.24	6.87
December	5.21	5.19	5.25	7.11

1933 when the exchange rate of the pound returned to par.

At this time new low cost production came to the world market from Africa, and in 1934 Congress placed an import excise tax of 4 cents per pound on copper to protect the American producer, which accounts for a part of the spread between American and English prices at the close of 1934.

COTTON

● The Cotton Crop of the United States picked in the autumn of 1931 was very large—over 17,000,000 bales. Prices declined from around 10 cents per pound early in the year to the very low price of 7 cents by September 1st, largely due to this over-production.

The crops of 1932 and 1933 were much less—around 13,000,000 bales, and world prices had an upward tendency from the low price of 1931. But prices in the United States went to lower levels, reaching a low of 5¼ cents per pound in 1932.

Rapid price recovery came in 1933 along with the recovery in the dollar value of the pound.

Sir Reginald McKenna's Views

Advantages of British Monetary Management with a Pound of Unfixed Gold Value as Compared to the Old Gold Standard with a Pound of Fixed Gold Value.

● The following statements taken from the address to stockholders of the Midland Bank Limited of London by the Rt. Hon. R. McKenna, Great Britain's former Chancellor of the Exchequer, on January 26, 1939, make it evident that the pound is to remain at an unfixed gold value and therefore free to fluctuate in terms of dollars.

"For the purpose of financing world trade considerable foreign balances are always held with London banks. These, however, are sometimes heavily supplemented for reasons having nothing to do with trade: a change of opinion as to the economic or political stability of this or that country will lead to large transfers from one center to another. At one time London may be the favored depository, at another New York. In 1936 and 1937 foreign balances in London were steadily increased, reaching their maximum in the spring of last year. The movement was then reversed as the European political outlook became threatening, and in nine months nearly the whole addition to foreign balances accumulated over more than two years, has been retransferred from London to other centers."

"The interesting feature for us in this huge transfer of funds lies in the operations of the Exchange Equalization Account (Called Stabilization Fund in U. S. A.) . . . "Thus we see how, with this new and efficient instrument, the Exchange Equaliization Account, in skillful operation there need be no conflict between the measures required to cope with large and irregular exchange movements and the **measures required to maintain an internal monetary policy appropriate to the conditions of domestic business and finance.** The conduct of the Exchange Account is entrusted to the Bank of England, acting as agent for the Treasury, and the events of last year afforded a valuable test of the working of a managed currency under exceptional and very difficult conditions. I could quote many examples to show, how under the (old) Gold Standard, external influences caused grave disturbance to internal credit. The vulnerability of the money market to external influences was extreme, and was due mainly to the statutory obligation to maintain the pound sterling at a fixed gold value. Today the central bank is no longer under this obligation; **there is freedom to allow the rate of exchange to swing more widely** and, by judicious purchases or sales of gold as foreign balances increase or diminish, to take the weight of great international movements of funds without affecting internal trade credit.

"The exchange Equalization Account is an essential part of the machinery for regulating monetary conditions. . . . The new technique of monetary management called into being since 1931 requires for its proper exercise far more knowledge, judgment and skill than were needed in working on the Gold Standard. There was no room for doubt then as to the action to be taken. If too much gold was leaving the country the Bank (interest) rate was put up and credit restricted until gold flowed back. If gold was coming in beyond what was necessary for reserve requirements, the Bank (interest) rate was lowered until foreign borrowing checked the inward flow.

"The simplicity, the almost automatism, of currency and credit control under the Gold Standard has been highly praised. But at what cost to trade and industry did the system operate? The Bank (interest) rate might have to be raised when internal conditions required not restriction but expansion of credit . . . as for example last year, when the outflow of gold would have led to severe credit restriction at the very time when confidence was already shaken and enterprise languishing. Seen in retrospect, the pre-war automatism in monetary affairs meant doing nothing until an acute state of financial weakness had been reached . . . a stage at which drastic action was inevitable, however damaging its effects might be on industry and trade. But why should the British industrialist and trader pay more for credit, or find credit more difficult to obtain, because foreign capitalists choose to transfer their bank balances from London to New York? Today human skill and judgment must take the place of automatism. **Open market dealings by the Bank of England and the operations of the Exchange Equalization Account are the modern instruments of control,** and after several years' experience we can appreciate how well they have been used. Monetary management on this scale is a new system and therefore in some degree experimental, but we all recognize the readiness of the authorities to profit by experience and the adaptation of methods to changing needs."

THE GOLD WRITE-UP

● In the issue of "The Spectator" published in London, February 10th, 1939, the financial editor comments as follows on the Currency and Bank Notes Bill recently adopted by Parliament, under the heading "The Gold Write-Up":

"I do not know whose hand one should detect in the new Currency and Bank Notes bill, but clearly there is no lack of ingenuity in Whitehall and Threadneedle Street. The decision to write up the Bank of England's gold holding to the current market price is not in itself surprising . . . it merely recognizes the recent rise in the sterling price of gold . . . but the provisions for making weekly adjustments between the Issue Department of the Bank and The Exchange Equalization Account introduces something novel in our currency arrangements. **Here is the last nail in the coffin of the old "automatic gold standard, which should now be given quiet burial."**

IN OTHER WORDS THE GOLD RESERVE OF THE BANK OF ENGLAND IS TO BE REVALUED WEEKLY AT THE CURRENT MARKET PRICE FOR GOLD IN TERMS OF POUNDS.

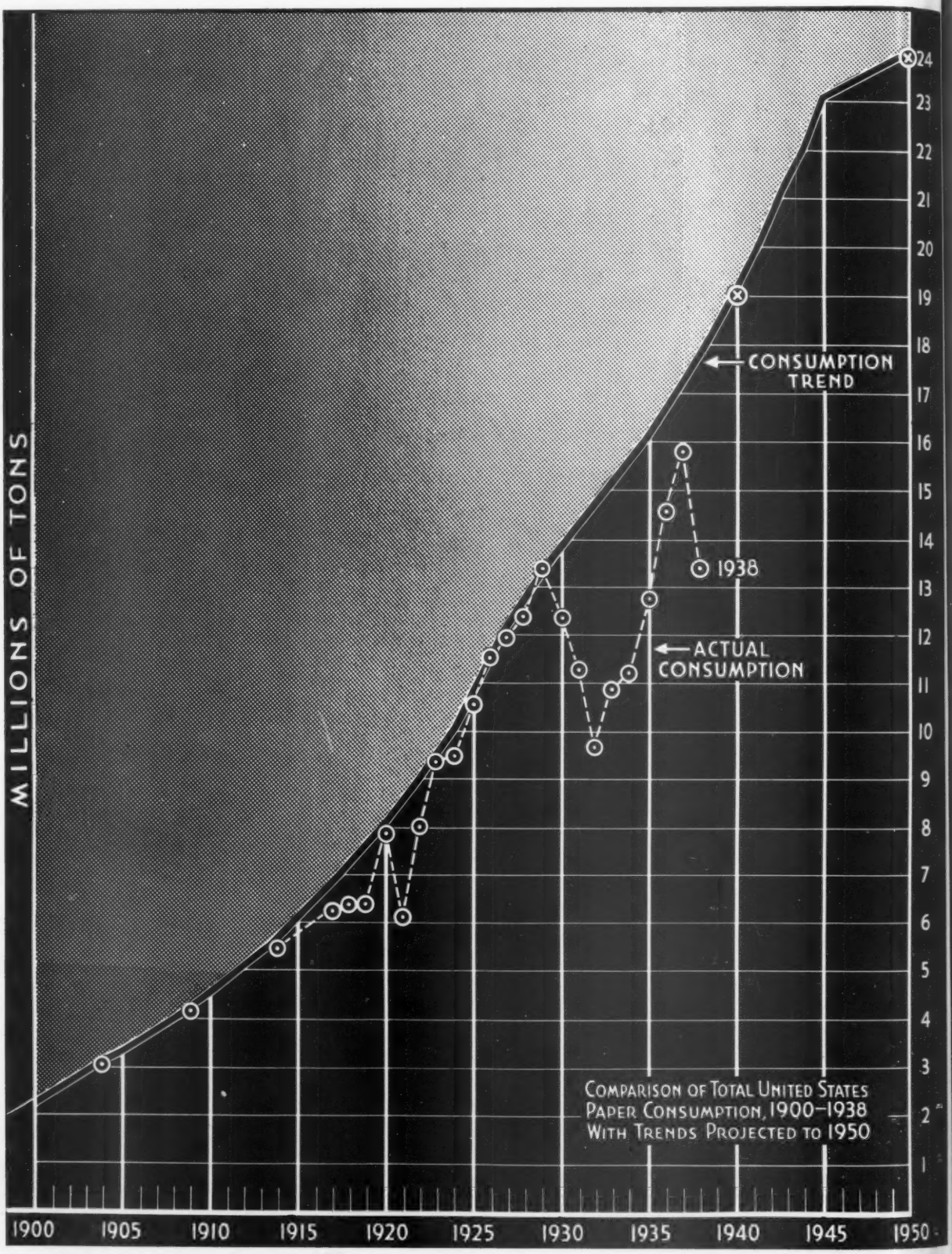
The unsettled condition of Europe has reacted unfavorably on business in Europe and England, and commodity prices in the world market have declined.

This condition also weakens the pound. Therefore, the lowered world prices in pounds become still lower prices in dollars in the United States, while fear of still greater depreciation of the pound causes loss of confidence in the future.

The threat of war has increased the purchase by England in the United States of articles which go into armaments. This upsets the balance of trade between the two countries and England must ship huge quantities of gold to America to balance the account, because they cannot borrow here. This loss of gold weakens the defence of the pound and threatens further depreciation.

The cumulative effect of these influences, acting upon the present relationship existing between the pound and the dollar, is to lower commodity prices in the United States. The result is depressing to both industry and agriculture.

THE POUND STERLING HAS AN UNFIXED GOLD VALUE, THE DOLLAR HAS A FIXED GOLD VALUE. WE MUST PROTECT OURSELVES FROM THE DANGER OF THIS SITUATION.



TREND OF PAPER CONSUMPTION is toward a United States paper consumption of 24,000,000 tons in 1950 ' ' ' This graph is drawn to an arithmetical vertical scale from a ratio scale graph prepared in April, 1938, by Charles W. Boyce, Executive Secretary of the American Paper & Pulp Association.

Paper and Board Production Steadily Improved in 1938

Although total paper production was 12% below 1937 and paperboard was off 11% the industry ended the year on a much higher level of activity—Total pulp production declined 9.5% but the production of bleached kraft pulp increased 95,000 tons or 41.6% and that of unbleached kraft increased 190,000 or 9.7%

PAPER and paperboard manufacturers in 1938 recovered much of the ground lost in the final quarter of 1937 as far as production was concerned, but prices did not recover due in large measure to the unstable pulp market.

The fourth quarter of 1937 saw paper production go from 73.5 per cent of capacity in October to 54.5 per cent in December and paperboard drop from 65 per cent in October to 45 per cent of capacity in December. Some decline in paperboard operations are normal as there is always a Fall peak in demand which drops off toward the end of the year. But the 1937 decline was greater than normal.

The year 1938 started with a paper production percentage of capacity of 63.9 per cent for January and ended with 74.4 per cent in December which was almost 20 per cent higher than December, 1937. During the year paper production reached its high point in October with 82.5 per cent. It was in October that 1938 first passed the ratio of production to capacity of 1937.

The improvement in paper production has continued through the first four months of 1939 with 77.5 per cent for January, 81.8 per cent for February, 84.1 per cent for March and 82.5 per cent for April.

The average production as per cent of capacity for 1938 was 72.3 per cent as compared with an average of 80.6 per cent for 1937, a decline of 8.3 per cent.

The average percentage of production to rated capacity in the United States paper industry over a fifteen year period, from 1923 through 1938, has been 75.7 per cent.

Paperboard production, which had dropped to 45 per cent of rated capacity in December of 1937, rose to 54 per cent in January, 1938. It reached its high point of 70 per cent in October after running at 66 per cent for both August and September. The year ended with 59 per cent for December, and an average for the year of 61 per cent as compared with 73 per cent in 1937, a decline of 12 per cent.

Production of wood pulp continued to trail behind in recovery of either production or prices. The decline of 6.1 per cent from 5,936,900 tons in 1937 to 5,575,000 tons in 1938 does not give the entire story. These tonnage figures include the pulp produced by both the self-contained pulp and paper mills and the pulp mills who produce solely for market. It was the group producing for the market that suffered most severely in 1938 as will be shown in detail later on.

Pulp Production and Consumption

● The United States Pulp Producers Association reports a total wood pulp production, all grades, for 1938 of 5,975,000 tons as compared with 6,599,970 tons in 1937, a decline of 624,970 tons or 9.5 per cent.

Bleached sulphite pulp production in 1938 amounted to about 1,000,000 tons against 1,380,000 tons in 1937. The reduction of 380,000 tons was 27.5 per cent less.

It will be noted in the table, "Summary for 1938 of United States Wood Pulp Production, Shipments and Stocks," that rayon grade bleached sulphite production amounted to 171,650 tons. Consumption of this grade was reported at 164,069, domestic shipments were 98,202 tons, exports were 72,800 tons and stocks on hand were 7,281 tons at the end of 1938. Imports of this grade amounted to 65,219 tons during the year.

Unbleached sulphite pulp production in the United States last year totalled 630,000 tons against 790,000 tons in 1937. The reduction was 160,000 tons or 20.2 per cent.

Bleached Kraft Increased

● Bleached sulphate pulp production amounted to 325,000 tons last

U. S. PAPER PRODUCTION—1934-1938*

(Tons of 2,000 lbs.)

	1934	1935	1936	1937	1938
Total—All Grades	**9,186,226**	**10,479,095**	**11,975,552**	**12,600,000**	**11,327,500**
Newsprint	989,705	947,717	938,287	962,700	833,000
Book papers	1,055,247	1,281,870	1,438,046	1,525,000	1,206,000
Coated Book	207,044	249,696	301,883	.....	.....
Paperboard	4,073,309	4,695,890	5,454,637	5,700,000	5,137,000
Wrapping	1,357,438	1,632,054	1,879,323	1,966,000	1,897,000
Writing	414,542	507,325	603,853	616,000	510,000
Cover	17,011	20,806	24,000	26,800	21,500
Tissue	398,770	473,314	494,721	525,000	500,000
Absorbent	78,953	95,179	105,000	.....	.....
Building	327,866	440,704	549,701	600,000	568,000
All Other	266,341	177,192	238,117	678,500	565,500

*Bureau of Census, U. S. Department of Commerce, Census of Manufacturers for 1934, 1935 and 1936 data. 1937 and 1938 estimates by the American Paper and Pulp Association and allied associations.

year as compared with 229,500 tons in 1937. This was an increase in 1938 of 95,500 tons or 41.6 per cent.

Unbleached sulphate pulp production in 1938 amounted to 2,145,000 tons, an increase of 190,000 tons or 9.7 per cent over the 1,955,000 tons produced in 1937.

Groundwood production in 1938 was 1,325,000 tons a drop of 257,400 tons below the 1937 production of 1,582,400 tons, or 16 per cent.

Soda pulp production declined 49,215 tons or 10.9 per cent, from 449,215 tons in 1937 to 400,000 tons in 1938.

It is estimated by the United States Pulp Producers Association that this country consumed a total of 7,545,029 tons of all grades of wood pulp in 1938. This was a decline in pulp consumption of 1,147,460 tons or 13.2 per cent.

The Wood Pulp Situation

● In a report to the Annual Meeting of the American Paper & Pulp Association in New York last February, Robert B. Wolf, vice-president of the United States Pulp Producers Association, said in part:

● "United States **chemical** pulp production, imports, exports and consumption during 1938, as contrasted with 1937, were as follows:

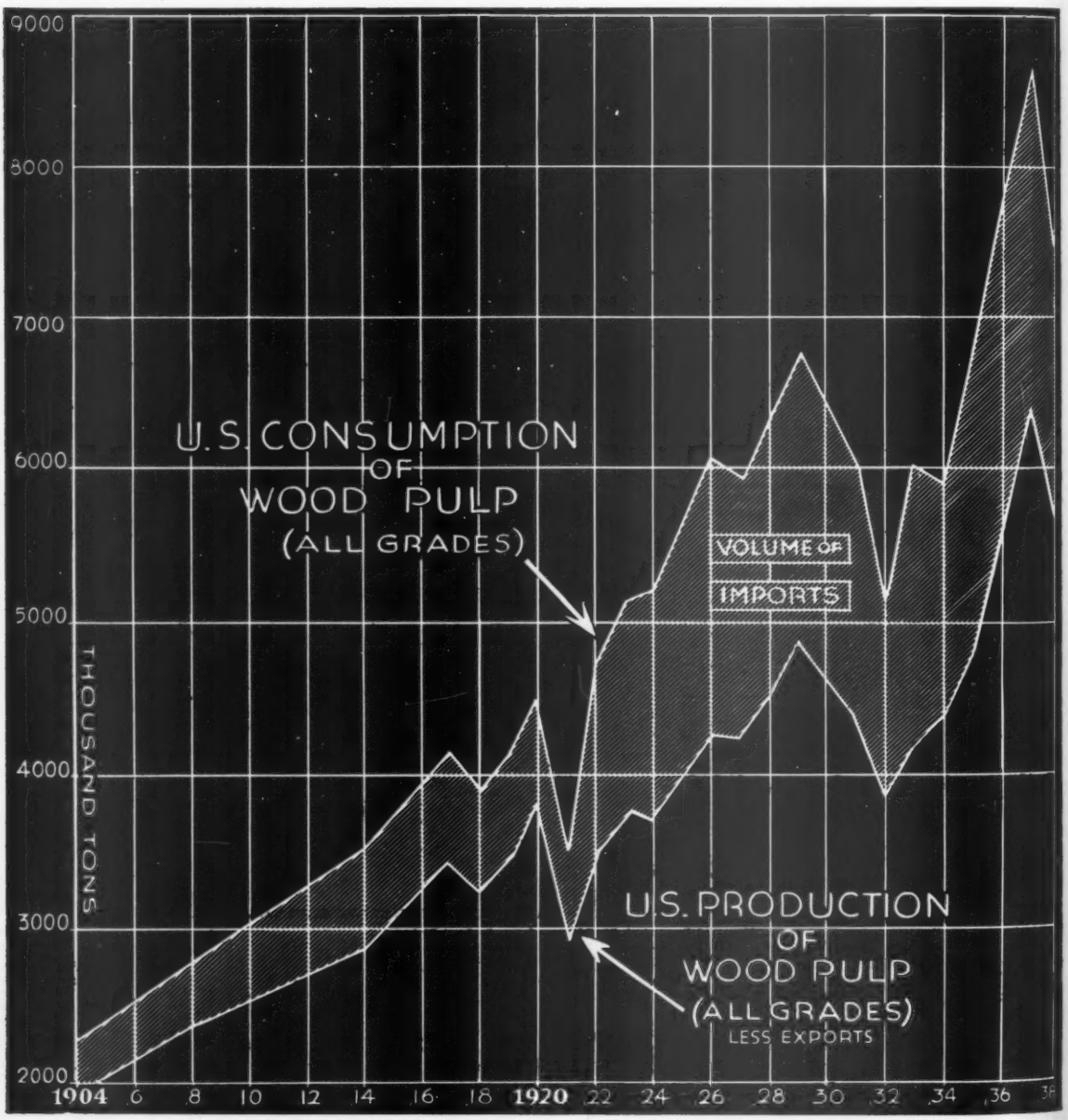
	1937	1938	Per Cent Change
Production	4,972,251	4,650,000	— 6½%
Imports	2,176,080	1,551,876	—29
Exports	302,056	140,484	—53½
Consumption	6,846,275	6,061,392	—11½

"One other important factor effecting the 'Pulp situation' is the matter of stocks.

"Based on identical mill reports to the Pulp Association, the situation as regards **market stocks** of domestic pulp (as contrasted with stocks for own use) was as follows, comparing stocks on hand at the end of 1937 and 1938:

	1937	1938	Per Cent Change
Bleached Sulphite	64,441	46,993	— 27%
Unbleached Sulphite	24,509	19,227	— 22
Bleached Sulphate	4,157	5,154	+ 24
Unbleached Sulphate	793	4,894	+517
Total, ALL GRADES (except Soda)	95,272	77,176	— 19

"As far as **Dock Stocks** are concerned, the last nine months have shown a slow but steady liquidation of domestic sulphite stocks on hand at American ports, while European



sulphite pulp stocks have been increasing, particularly in **unbleached sulphite.**

"**Total Dock Stocks,** at both Atlantic and Lake Ports, as of February 1, 1939, are probably 75,000 tons less than the volume on hand a year ago, or some 325,000 tons as contrasted with about 400,000 tons on hand February 1, 1938.

"**Now in regard to our business prospects:**

"The market situation, at least from the sellers' point of view, grew progressively worse during 1938, despite a reasonably satisfactory rate of consumption. This condition resulted from

"1—The decline in paper mill operation during 1937 and shrinkage of foreign demand in 1938.

"2—Reaction to the peak prices established by the Scandinavian producers during 1937.

"3—The accumulation of relatively heavy stocks of European pulps both at American ports and in foreign mills' warehouses.

"4—The relatively high rate of production by European mills during 1938 (when the principal domestic mills manufacturing for the market were forced to operate at less than 30 per cent of capacity).

"5—Financial pressure on European producers to move tonnage.

"All of these factors combined to drive the market on paper grades of bleached sulphite, for example, from spot figures of $90 or so a ton for European pulps, to their present contract levels of about $50—within a period of twelve months. However, the early 1939 statistical posi-

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TOTAL UNITED STATES PRODUCTION OF WOOD PULP
By Grades—1925-1938*

(Tons of 2000 pounds)

Year.	Total	Unbleached Sulphite	Bleached Sulphite	Total Sulphate	Groundwood	Soda	All Other
1925	3,962,217	790,510	612,576	409,768	1,612,019	472,647	64,697
1926	4,394,766	911,729	646,466	519,960	1,764,248	496,920	55,463
1927	4,313,403	872,411	680,288	603,253	1,610,409	487,478	59,564
1928	4,510,800	836,751	722,107	774,225	1,610,988	488,641	78,088
1929	4,862,885	848,754	839,953	910,888	1,637,653	520,729	104,908
1930	4,630,308	815,897	751,166	949,513	1,560,221	474,230	79,281
1931	4,409,344	675,859	740,812	1,034,291	1,449,240	374,054	135,088
1932	3,760,267	548,702	596,937	1,028,846	1,203,044	290,703	92,035
1933	4,276,204	601,102	726,473	1,259,351	1,197,553	457,790	33,935
1934	4,281,428	599,905	806,612	1,240,967	1,253,398	477,089	35,457
1935	4,944,226	611,084	983,664	1,467,749	1,355,819	489,238	36,672
1936	5,715,000	680,000	1,150,000	1,817,000	1,496,000	531,960	40,040
1937	6,600,000	790,000	1,380,000	2,184,500	1,582,400	449,215	213,885
1037	5,975,000	630,000	[1]1,000,000	2,470,000	1,325,000	400,000	150,000

*Source: From 1925 through 1933 and for 1935, U. S. Bureau of Census. 1934, 1936, 1937, 1938 data from United States Pulp Producers Association.
[1]Includes 171,650 tons of rayon and special chemical grades.

UNITED STATES
Paper and Woodpulp Production and Consumption
Consumption of Domestic and Imported Pulpwood and Total Pulpwood Consumption

Specified Years, 1899-1938

Year—	PAPER		WOODPULP		CONSUMPTION OF PULPWOOD		
	Production (tons)	Consumption (tons)	Production (tons)	Consumption (tons)	Domestic (cords)	Imported (cords)	Total (cords)
1899	2,167,593	2,158,000	1,179,525	1,216,254	1,617,093	369,217	1,986,310
1904	3,106,696	3,049,824	1,921,768	2,091,006	2,477,099	573,618	3,050,717
1909	4,216,708	4,224,000	2,495,523	2,856,593	3,207,653	793,954	4,001,607
1914	5,270,047	5,496,164	2,893,150	3,556,377	3,641,063	829,700	4,470,763
1917	5,919,647	6,255,725	3,509,939	4,148,600	4,706,327	773,748	5,480,075
1918	6,051,523	6,387,066	3,313,861	3,869,746	4,506,276	744,518	5,250,794
1919	6,190,361	6,479,490	3,517,952	4,113,911	4,445,817	1,032,015	5,477,832
1920	7,334,614	7,846,827	3,821,704	4,696,035	5,014,513	1,099,559	6,114,072
1921	5,356,317	6,053,915	2,875,601	3,544,218	3,740,406	816,773	4,557,179
1922	7,017,800	8,007,088	3,521,644	4,756,105	4,498,808	1,050,034	5,548,842
1923	8,029,482	9,339,573	3,788,672	5,149,695	4,636,789	1,236,081	5,872,870
1924	.....	.....	3,723,266	5,216,265	4,720,191	1,047,891	5,768,082
1925	9,182,204	10,590,090	3,962,217	5,590,304	5,005,445	1,088,376	6,093,821
1926	.....	.....	4,394,766	6,096,279	5,489,517	1,276,490	6,766,007
1927	10,002,070	11,915,233	4,313,403	5,960,865	5,526,889	1,224,046	6,750,935
1928	10,403,338	12,447,841	4,510,800	6,239,641	5,750,689	1,409,411	7,160,100
1929	11,140,235	13,347,925	4,862,885	6,704,341	6,411,566	1,233,445	7,645,011
1930	10,169,140	12,314,819	4,630,308	6,463,185	6,089,852	1,105,672	7,195,524
1931	9,381,840	11,403,850	4,409,344	6,005,718	5,896,446	826,320	6,722,766
1932	7,997,872	9,733,764	3,760,267	5,083,446	4,891,424	741,699	5,633,123
1933	9,190,017	10,919,391	4,293,344	6,027,088	5,933,295	628,379	6,561,674
1934	9,186,266	11,185,682	4,281,428	5,969,633	5,943,223	973,978	6,917,201
1935	10,506,195	12,490,886	4,944,226	6,877,869	6,590,942	1,037,332	7,628,274
1936	11,670,000	14,546,046	5,695,219	7,420,829	7,506,156	1,209,760	8,715,916
1937	12,600,000	15,798,362	6,617,184	8,692,489	8,870,932	1,522,868	10,393,800
1938	11,327,000	13,488,300	5,975,000	7,975,000	8,087,750	1,293,000	9,380,750

Source: Bureau of the Census, Federal Trade Commission, United States Forest Service and A. P. & P. A. Bureau Foreign and Domestic Commerce.
Cords: 128 cubic feet.
*Pulpwood requirement is a computed figure which represents the pulpwood required to manufacture the total paper consumption of a year.

tion of the domestic pulp industry indicates possible advances in both domestic production and market values. Whether or not these will be realized depends upon a number of factors whose influences are only partially apparent in the present trends of production, imports and stocks. Among these might be mentioned:

"1—The volume and extent of foreign commitments for 1939 at or about present market values.

"2—The effect upon such values, of domestic and international competition in unbleached sulphite and kraft pulps.

"3—Political and economic influences on industrial recovery in this country and a limitation or expansion of other world markets.

"There is one other factor which cannot be disregarded in respect to 1939 prospects, and that of course is peace or war in Europe and throughout the world. But broadly speaking, however, it would seem reasonable to expect some improvement in the pulp situation in 1939, with the extent depending largely upon the factors mentioned above.

And finally, in reference to our problems:

"The competitive situation, as far as imports are concerned, was intensified during 1938 by the following advantages enjoyed by European pulp producers which cannot be matched in North America:

"1—Lower labor costs.

"2—Lower ocean freight rates.

"3—Depreciated European currencies.

"Any one of these would be bad enough; added together they create a competitive situation which is an unhappy and an unhealthy one. We do not know just what the answers are but we expect to find a solution for this problem and in such a way that the Pulp Division of your industry may contribute its full share toward recovery and may furnish a reasonably stable basis for improvement throughout the whole industry."

Paper Production and Consumption in 1938

● The consumption of paper and paper board in the United States during 1938 is estimated to have been around 13,488,000 tons as compared with 15,798,000 tons in 1937, a decline of 2,310,000 tons or 14.6 per cent.

Production of paper and paperboard during 1938 is estimated to have approximated 11,327,000 tons as compared with 12,600,000 tons in 1937, a reduction of 1,273,000 tons or 10 per cent. The decrease in tonnage produced in 1938 was distributed among all grades.

Paperboard production last year totalled around 4,889,000 tons, a decrease of 11 per cent from the 5,503,300 tons produced in 1937.

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BRITISH COLUMBIA

Review of Pulp and Paper Production

1919-1938

	—PULP—		Tons	—PAPER—	
	Sulphite	Sulphate	Groundwd	News Print	Other
1938	.....	.....	.....	180,000	39,000
1937	.....	.....	.....	264,000	53,000
1936	.....	.....	.....	276,710	41,443
1935	.....	.....	.....	262,123	33,287
1934	130,176	15,630	209,359	267,406	26,777
1933	122,265	15,715	185,451	237,107	23,492
1932	85,419	10,889	161,502	205,050	24,051
1931	124,521	11,744	170,432	217,562	17,709
1930	130,462	13,055	172,539	224,928	20,446
1929	112,925	15,647	151,066	201,009	19,492
1928	120,413	15,050	170,005	225,477	15,960
1927	119,005	13,700	163,548	214,010	13,745
1926	108,381	15,000	136,123	176,924	10,389
1925	92,514	16,856	121,363	148,201	9,261
1924	89,839	14,403	112,001	136,281	9,633
1923	99,878	9,932	107,266	142,928	7,709
1922	86,894	9,674	100,759	124,639	7,945
1921	68,502	6,519	89,725	110,176	6,934
1920	92,299	16,380	108,655	136,832	9,792
1919	80,347	9,473	99,769	123,607	7,202

	Total Production All Grades—Tons		Estimated value
	Pulp	Paper	of production:
1938	249,000	219,000	.....
1937	425,558	320,920	$21,625,305
1936	416,433	320,555	19,012,369
1935	377,522	299,816	10,708,145
1934	383,818	299,502	10,347,123
1933	323,431	260,599	10,852,000
1932	259,586	228,075	11,156,000
1931	310,029	244,397	13,508,000
1930	316,056	245,374	16,520,000
1929	279,638	220,501	14,400,000
1928	305,468	241,437	16,755,000
1927	296,253	227,755	18,505,000
1926	259,504	187,313	16,315,000
1925	230,733	157,462	14,466,000
1924	216,243	145,934	13,938,000
1923	217,076	150,637	15,018,000
1922	197,327	132,584	12,590,000
1921	164,746	117,110	13,500,000
1920	217,334	146,624	.....
1919	189,589	130,809	.....

Source—British Columbia, Department of Lands, Report of the Forest Branch.

SUMMARY FOR 1938 OF UNITED STATES WOOD PULP PRODUCTION, SHIPMENTS *and* STOCKS*

Tons of 2,000 lbs., air dry weight.

		Shipments		Stocks on Hand End of Period	
	Production	Used	Domestic Market	Export	12/31/38	1/1/38
Total All Grades, 1938[1]	5,975,000	7,545,029	627,300	140,484	166,687	170,571
Total Sulphite	1,630,000	2,531,743	445,230	124,238	86,452	110,194
Total Bleached Sulphite	1,000,000	1,247,397	321,230	90,262	54,660	74,850
Rayon	171,650	164,069	98,202	72,800	7,281	.....
Other	828,350	1,083,328	223,028	17,462	47,379	.....
Total Unbleached Sulphite	630,000	1,284,346	124,000	33,976	31,782	35,344
Total Bleached Sulphate	325,000	414,673	41,923	500	22,696	6,620
Total Unbleached Sulphate	2,145,000	2,565,589	24,000	5,500	17,370	14,732
Total Soda	400,000	406,676	71,147	2,729	4,826	.....
Total Groundwood	1,325,000	1,483,865	30,000	.....	34,218	38,930
Total[2] Other Pulps	150,000	142,483	15,000	7,517	1,125	95

*Source: United States Pulp Producers Association.

[1]As reported to the United States Pulp Producers Association by 90 per cent of the industry's productive capacity and estimated for 10 per cent.

[2]Includes miscellaneous grades for which no classifications are shown.

Newsprint production in the United States was 820,000 tons according to the News Print Service Bureau figures, the lowest in 35 years and 13.3 per cent below the 946,000 tons produced in 1937.

The decline in the production of other grades is shown on the production table.

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PAPERBOARD MILL CENSUS

In Tons

CONTAINER BOARDS

GRADES	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Liners - Jute	884,100	818,600	726,200	604,000	735,100	737,300	888,600	1,029,300	1,047,600	703,700
Liners-Kraft Cyl.	182,200	174,800	194,800	171,300	227,000	232,900	261,900	295,500	291,900	239,600
Kraft Four.	51,600	93,900	150,900	190,300	252,300	257,700	294,600	389,600	461,600	604,400
Total Kraft	233,800	268,700	345,700	361,600	479,300	490,600	556,500	685,100	753,500	844,000
Total Liners	1,117,900	1,087,300	1,071,900	965,600	1,214,400	1,227,900	1,445,100	1,714,400	1,801,100	1,547,700
Chip-Corrugating	116,500	70,200	63,800	53,000	61,700	66,100	69,100	95,800	94,700	82,100
Solid Fibre	365,000	332,500	295,500	228,100	242,900	209,100	208,400	232,000	242,400	171,900
Total Chip	481,500	402,700	359,300	281,100	304,600	275,200	277,500	327,800	337,100	254,000
.009 Straw, Etc.	403,600	375,500	343,800	299,700	386,200	393,700	472,800	554,100	586,600	471,100
.009 Kraft	2,800	10,100	40,000	73,300	73,700	89,000	115,400	145,900	149,600	202,300
Total .009	406,400	385,600	383,800	373,000	459,900	482,700	588,200	700,000	736,200	673,400
TOTAL	2,005,800	1,875,600	1,815,000	1,619,700	1,978,900	1,985,800	2,310,800	2,742,200	2,874,400	2,475,100

BOXBOARDS

Folding Box	943,400	917,600	903,200	772,300	877,900	921,300	1,028,200	1,192,600	1,220,300	1,147,500
Set-up Box	657,900	601,900	575,400	500,900	573,900	527,600	550,700	612,900	597,300	541,900
Total	1,601,300	1,519,500	1,478,600	1,273,200	1,451,800	1,448,900	1,578,900	1,805,500	1,817,600	1,689,400
Other	634,400	529,000	475,200	396,100	473,500	493,600	623,700	742,900	811,300	724,500
TOTAL	2,235,700	2,048,500	1,953,800	1,669,300	1,925,300	1,942,500	2,202,600	2,548,400	2,628,900	2,413,900

SUMMARY

JUTE, Chip, Boxboard Straw, Etc.	3,994,300	3,615,600	3,365,000	2,835,700	3,318,300	3,294,900	3,780,500	4,403,900	4,522,700	3,763,800
KRAFT, Liner,.009Etc	247,200	308,500	403,800	453,300	585,900	633,400	732,900	886,700	980,600	1,125,200
TOTAL ALL GRADES	4,241,500	3,924,100	3,768,800	3,289,000	3,904,200	3,928,300	4,513,400	5,290,600	5,503,300	4,889,000

Revised April 15th, 1939. NATIONAL PAPERBOARD ASSOCIATION

UNITED STATES

Paper Board—Operation, Production, Orders[1]

(.012 of an inch or more in thickness)

Year and Month—1938	—Operation—(Inch hours[1]— (Based on last dryer width) Rated Capacity	Operated	Per Cent of Capacity	—Production—(Short tons)— Rated Capacity	Output	Per Cent of Capacity	New orders (Short tons)	Unfilled orders end month (Short tons)
January	15,868,832	9,082,127	57.2	490,492	268,121	54.7	269,367	79,595
February	15,305,253	9,450,889	61.7	472,046	282,248	59.8	273,651	72,832
March	17,264,990	10,639,603	61.6	532,822	318,552	59.8	317,472	74,137
April	16,651,914	10,186,848	61.2	516,496	303,073	58.7	302,921	75,296
May	16,137,993	9,557,162	59.2	499,386	286,574	57.4	281,401	76,701
June	17,448,971	9,744,971	55.8	539,440	296,960	55.0	298,845	76,693
July	16,799,781	10,030,563	59.7	513,069	306,343	59.7	322,948	93,637
August	17,495,698	11,770,100	67.3	533,443	358,977	67.3	361,323	96,635
September	16,799,687	11,263,340	67.0	512,540	351,051	68.5	367,200	109,288
October	16,845,693	11,874,787	70.5	512,074	370,977	72.4	370,453	107,235
November	17,083,581	11,127,331	65.1	519,621	344,445	66.3	327,168	89,586
December	17,957,075	10,745,648	59.8	547,622	329,181	60.1	334,711	94,411
Total (Year 1938)	**201,659,468**	**125,473,369**	**62.2**	**6,188,954**	**3,816,502**	**61.7**	**3,827,460**	.....
Total (Year 1937)	**193,449,553**	**143,747,844**	**74.3**	**5,648,035**	**4,293,717**	**76.0**	**4,163,060**	.....
Total (Year 1936)	**176,217,757**	**129,343,411**	**73.4**	**5,001,147**	**3,658,871**	**73.2**	**3,720,996**	.....
Total (Year 1935)	**178,529,564**	**119,579,631**	**67.0**	**4,861,628**	**3,294,055**	**67.8**	**3,281,525**	.....
Total (Year 1934)	**176,800,951**	**105,201,235**	**59.5**	**4,767,029**	**2,839,705**	**59.6**	**2,807,470**	.....
Total (Year 1933)	**165,594,126**	**105,986,270**	**64.0**	**4,619,730**	**2,912,374**	**63.0**	**2,913,370**	.....
Total (Year 1932)	**138,115,824**	**75,979,629**	**55.0**	**3,904,824**	**2,152,045**	**55.1**	**2,148,991**	.....
Total (Year 1931)	**137,218,968**	**91,894,961**	**67.0**	**3,879,836**	**2,556,851**	**65.9**	**2,527.024**	.....
Total (Year 1930)	**139,179,840**	**96,843,592**	**69.6**	**3,917,436**	**2,699,595**	**68.9**	**2,685,373**	.....

[1]Monthly statistics compiled from data furnished by the National Paperboard Association from reports of members, and by manufacturers reporting direct to the Bureau of Census, are pesented in the above tables. These statistics were released by Director W. L. Austin, Bureau of the Census, Department of Commerce.

Rated (24-hour) capacity data for paperboard machines in inch hours hours in this report are based on last dryer width whereas those shown in the reports for 1932 and earlier years were based on maximum trim width. The capacity data vary according to the normal number of working days in each month.

U. S. Newsprint Production Lowest in 35 Years

1938 production of 820,000 tons was 126,000 tons or 13.3% below 1937 — However, U. S. producers supplied 27.3% of American market against 22% in 1937 — World newsprint production declined 16% — Canadian production down 28% — Japan, Russia and Italy increased newsprint production in 1938

WORLD newsprint production in 1938, amounting to some 7,500,000 tons, represented a decline of 1,472,000 tons or 16 per cent from the record production of 8,982,000 tons in 1937, according to the annual report of R. S. Kellogg, secretary of the News Print Service Bureau. This was the largest decrease in a single year of record in the industry, says Mr. Kellogg.

Although the world total went down and the largest newsprint producing countries suffered severe curtailment of production, three nations, Japan, Russia and Italy, reported increased production in 1938 over 1937. Japan, with a 1938 production of 429,000 tons was 16,000 tons ahead of 1937. Russia produced 234,000 tons in 1938, 17,000 tons more than in 1937. And Italy increased newsprint production by 11,000 tons to 77,000 tons for 1938.

Finland's newsprint industry held up well with production down but 2,000 tons below 1937 and ahead of all previous years.

Canada, the largest producer, suffered the biggest decline in production from her record production of 3,645,000 tons in 1937. Canadian production in 1938 amounted to 2,630,000 tons, a drop of 1,015,000 tons below 1937 or 28 per cent.

Great Britain's production was 8 per cent under 1937. However, says Mr. Kellogg, the production of newsprint in Great Britain has been gradually increasing for many years up to and including 1937, and the 1938 decrease was less than in a number of other countries.

Production of newsprint in the United States declined to the lowest point in 35 years, 820,000 tons as compared with 946,000 tons in 1937, a reduction of 126,000 tons or 13.3 per cent. The 1938 newsprint production in this country was less than half of the production in 1926 when the total was 1,684,000 tons.

Although American newsprint production hit a low point last year imports dropped enough more in proportion to give the American producers 27 per cent of the American market instead of the 22 per cent which they had in 1937. The 1937 share of 22 per cent was the lowest percentage on record.

North American Production

Quoting R. S. Kellogg's report on "News Print in 1938":

● "Production of newsprint paper in North America in 1938 was of the same order as in 1931 and only 24,000 tons more than in that year.

"The 3,713,000 tons turned out last year were 1,230,000 tons or 25 per cent less than in 1937—the largest drop in both quantity and percentage ever experienced in the industry from one year to a following one.

"The 1938 production was made to the extent of 2,625,000 tons or 71 per cent in Canada, 820,000 tons or 22 per cent in the United States and 268,000 tons or 7 per cent in Newfoundland. The decrease compared with the previous year was 28 per cent in Canada, 23 per cent in Newfoundland and 13 per cent in the United States. Canadian output was slightly more than in 1934 while United States production was the least of any year since 1903. Newfoundland tonnage was approximately the same as in 1933.

"Shipments from Canadian mills were 2,506,000 tons, from United States mills 818,000 tons and from Newfoundland mills 264,000 tons, a grand total of 3,588,000 tons or 125,000 tons less than production. These shipments left the mills with 227,000 tons on hand December 31, 1938, compared with 102,000 tons for the corresponding date a year earlier.

"The 1938 output of newsprint was made at approximately 67 per cent of capacity operation of the North American industry. Canadian mills averaged about 63 per cent, Newfoundland mills 72 per cent and United States mills 84 per cent. The American Paper & Pulp Association reports that 300 mills in the United States, making every kind of paper, averaged 72 per cent of their rated capacity operation in 1938.

"North American newsprint production of 3,713,000 tons last year was half of a world production of around 7,400,000 tons. The decrease in world production from 1937 was about 18 per cent, the industry elsewhere having had a higher operating ratio than in America.

North American Exports

● "Exports of newsprint paper from Canada during 1938 are officially reported in round numbers to have been 2,425,000 tons, a decrease of 1,030,000 tons or almost 30 per cent from the record in 1937. The 1,938,000 tons shipped to the United States were 961,000 tons or 33 per cent less than in the preceding year, while the 486,000 tons sent overseas were 70,000 tons or nearly 13 per cent less than in the preceding year. The 1937 overseas exports of newsprint from Canada were the smallest of any year since 1934.

"Last year's overseas newsprint exports from Canada went to the extent of 44 per cent to Australia-New Zealand, 39 per cent to the United Kingdom (including Ireland) and 7 per cent to South America. There were large gains in last year's shipments over the preceding year to the United Kingdom, Ireland and

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U. S. Newsprint Industry's Share of Domestic Market Increased 5% In 1938

Each circle represents the total United States newsprint consumption for that year with the percentage of consumption supplied by domestic production and by imports.

From 1915 through 1937 the percentage of the domestic market supplied by American newsprint producers declined from 76.3 per cent in 1915 to 22 per cent in 1937. In 1938 the trend was reversed and American producers furnished 27.3 per cent of the American newsprint consumption despite the fact that domestic production was the lowest in 35 years.

The gain was due to the greater percentage reduction in newsprint imports than in domestic production. United States newsprint production in 1938 was a little less than half the production in 1926.



1915—



1925—

Australasia. On the other hand, there was a decrease of 67 per cent in shipments to South America—principally Argentina—a large relative decrease in shipments to Cuba, while only 1,800 tons went to Japan and China compared with 45,000 tons in 1937. Striking also was the shipment of only 94 tons of Canadian newsprint to Mexico last year compared with 19,000 tons in 1937. Mexico, as is generally known, has appropriated the oil of foreign producers in that country and is bartering it to Germany for newsprint paper.

"Overseas exports of newsprint from Newfoundland are reported to have been 204,000 tons in 1938, the destination of course, being chiefly England. This was a decrease of 37,000 tons or 15 per cent from 1937.

"Overseas exports of newsprint from States totaled only 6,000 tons and were the least of any year on record. They went chiefly to Cuba and Central America.

U. S. Newsprint Imports

● "Imports of newsprint paper into the United States during 1938 from all sources amounted to 2,275,000 tons, a decrease of 1,042,000 tons or 31 per cent from 1937. While these imports were two and three quarter times domestic production, they were the smallest of any year since 1934 because of accumulated stocks in the hands of United States publishers and smaller consumption. These imports came to the extent of 86 percent from Canada, 11 per cent from Europe and 3 per cent from Newfoundland.

"The newsprint paper which came into the United States last year from Europe to the extent of 243,000 tons was supplied in the amount of 151,000 tons by Finland, 71,000 tons by Sweden, 11,000 tons by Norway and 10,000 tons by Germany. While there was 51,000 tons or 17 per cent less newsprint taken into the United States from Europe last year than the year before, the decrease was by no means evenly distributed. In 1938, for instance, Sweden supplied 71,000 tons, a decrease of 30,000 tons from shipments to the United States in 1937. The 11,000 tons which came from Norway last year were 14,000 tons less than in the preceding year. Receipts of 10,000 tons from Germany were a decrease of 3,000 tons from 1937. On the other hand, the 151,000 tons of newsprint imported into the United States in 1938 from Finland were only 4,000 tons or 3 per cent less than in 1937.

"The manufacturing capacity of the Finnish newsprint industry was substantially enlarged in 1938, making certain that competition from that source will be maintained in full vigor.

North American Stocks

● "Stocks of newsprint paper at North American mills—Canada, United States, Newfoundland—on December 31, 1938, totaled 227,000 tons. Stocks on hand or in transit to the publishers reporting to the ANPA on the same date were 315,000 tons. If it is assumed—as seems reasonable—that publishers not reporting to the ANPA held stocks in the same proportion, the total of mill and publishers stocks at the end of the year was 625,000 tons or a decrease of 244,000 tons from the quantity held on December 31, 1937. This represents a substantial improvement in the situation which will be reflected in mill operating ratios in 1939.

"The publishers reporting to the ANPA began 1938 with nearly 614,000 tons on hand or in transit or 75 days' supply at the current rate of consumption and came to the end of the year with 315,000 tons or 41 days' supply. They used 299,000 tons out of their stocks during the year. The 315,000 tons which these publishers had on December 31, 1938, was the smallest quantity they have had since March 1937 and is close to a normal situation. While manufacturers' stocks are still heavy, it will not require much pick-up in consumption to bring them also down to normal and thus once more have a situation in which current consumption is closely reflected in current production.

U. S. Consumption

● "The publishers reporting to the ANPA used in round numbers 2,738,000 tons of newsprint paper in 1938—a decrease of 322,000 tons or 10½ per cent from the amount used in 1937. Their consumption was, in fact, very close to that of 1938.

"As was anticipated earlier, the last quarter of 1938 was the best one. Consumption by these publishers in the final three months totaled 736,000 tons and averaged but 6 per cent less than in the final quarter of 1937. In June—the low point of the year—they used 16 per cent less newsprint than in June of the preceding year.

"On the assumption that the publishers reporting to the ANPA used 79.2 per cent of all the newsprint consumed in the United States—which is justified by an analysis of figures of domestic production plus imports and changes in stocks—the actual consumption in 1938 was around 3,458,000 tons. This was a decrease of 372,000 tons or 9.7 per cent from the amount of newsprint used in the country in 1937 and was approximately midway between the tonnage used in 1935 and in 1936. It was, in fact, but little more than the consumption in 1927. That year, however, the 3,445,000 tons used was equivalent to 58.2 pounds per capita, whereas the consumption in 1938 was equivalent to 53.1 pounds per capita. This was 6.2 pounds per capita less than in 1937.

Reasons for Decline

● "The explanations of last year's decrease in newsprint consumption are, of course, obvious. It was due to the heavy decrease in the volume of advertising, the small decrease in circulation and also to the economies effected by publishers through the use of narrower rolls and in other ways. Some partial statistics upon changes in roll sizes made within the past two years indicate a saving of at least 25,000 tons by the papers making these changes over the amount of paper which they consumed in 1937. A considerable number of newspaper suspensions and mergers were also more than a negligible factor in the decreased consumption of newsprint paper in 1938."

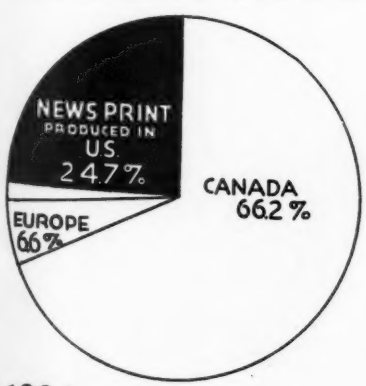
Brazilian Newsprint Imports Decline in 1938

● Imports of newsprint into Brazil during 1938 are estimated to have reached 41,675 metric tons as compared with 58,625 in 1937. Of the 1938 receipts, 34 per cent came from Sweden, 25 per cent from Finland, 19 per cent from Norway and 17 per cent from Germany. The volume of imports approximates the total newsprint consumption in Brazil since none is produced locally. (Office of the American Commercial Attache, Rio de Janeiro.)

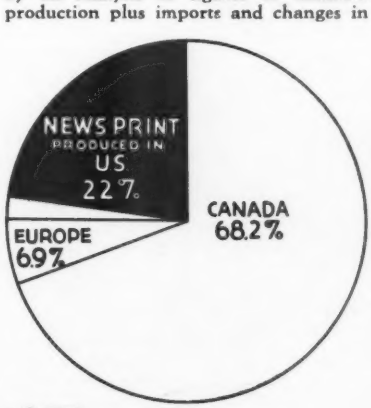
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The Cover Photograph

was taken in the beater room of the Hawley Pulp & Paper Company at Oregon City, Oregon, through the courtesy of Carl E. Braun, Vice-President and Mill Manager.



1936–



1937–



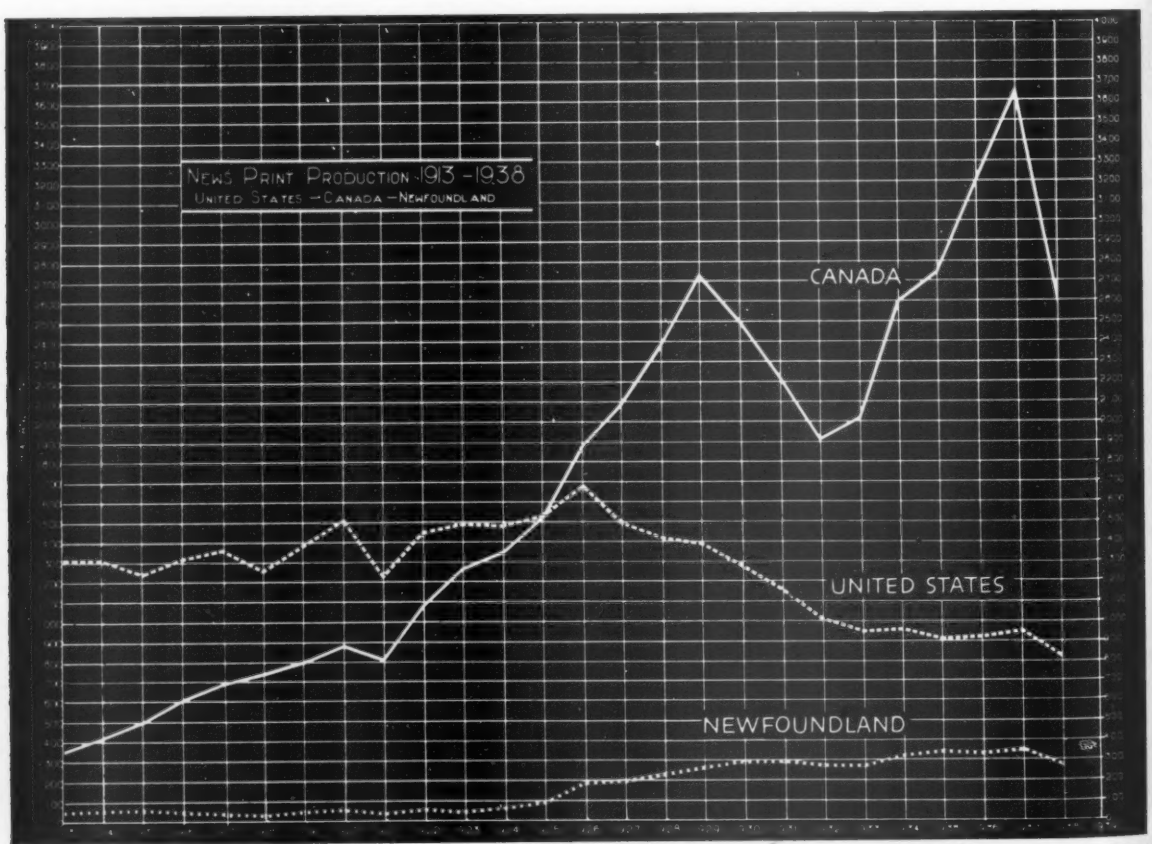
1938–

SOURCES OF NEWSPRINT USED IN THE UNITED STATES

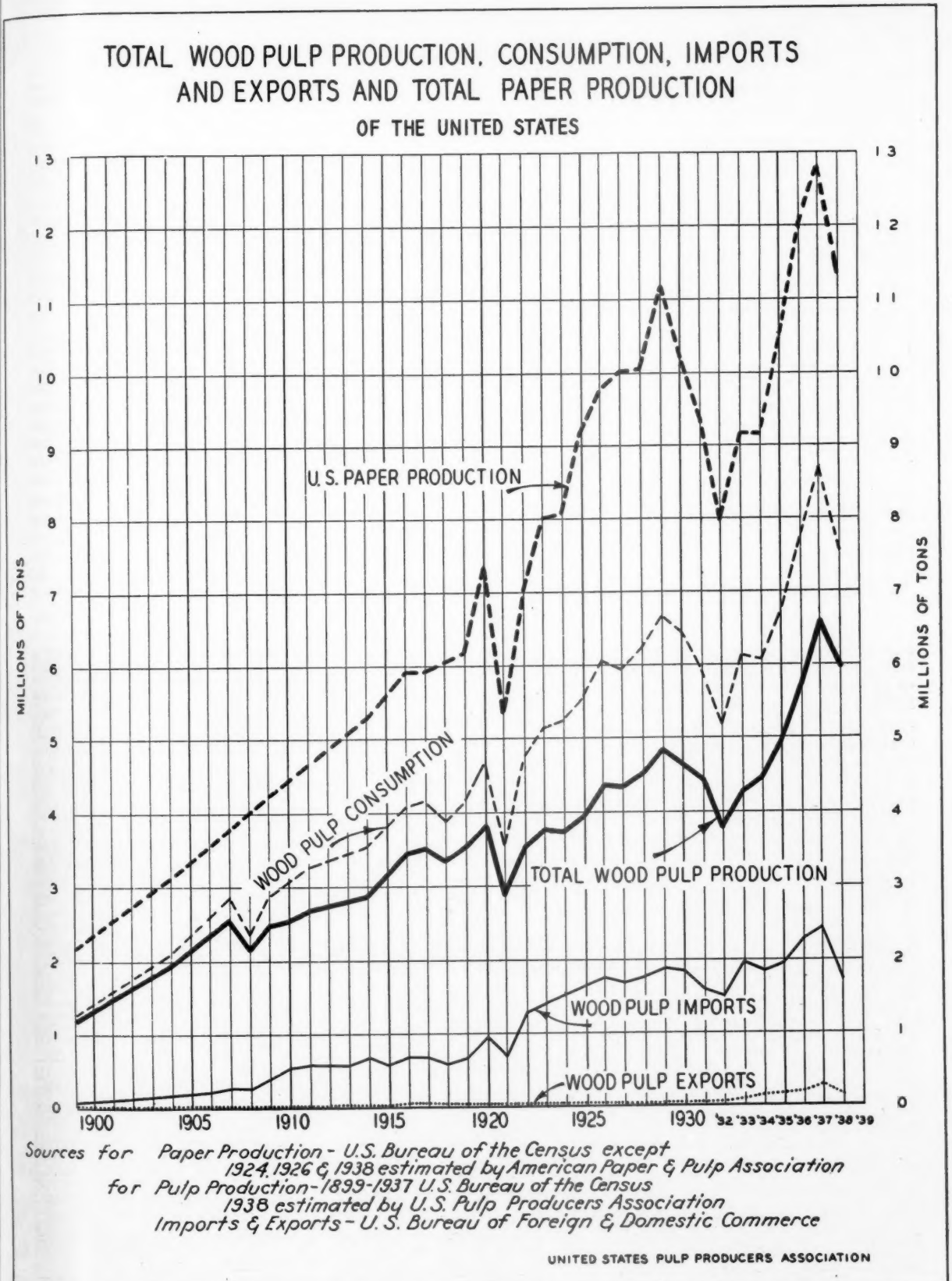
(Tons in Round Numbers)

Source: News Print Service Bureau

	U. S. Production	U. S. Exports	Imports into the U. S. From			Available for Consumption
			Canada	Newfoundland	Europe	
1913	1,305,000	43,000	219,000	.....	1,000	1,482,000
1914	1,313,000	61,000	310,000	.....	5,000	1,567,000
1915	1,239,000	55,000	367,000	.....	1,000	1,552,000
1916	1,315,000	76,000	468,000	.....	.....	1,707,000
1917	1,359,000	94,000	558,000	.....	1,000	1,824,000
1918	1,260,000	97,000	596,000	.....	.....	1,759,000
1919	1,375,000	111,000	628,000	.....	3,000	1,895,000
1920	1,512,000	49,000	679,000	1,000	50,000	2,193,000
1921	1,225,000	17,000	657,000	.....	135,000	2,000,000
1922	1,448,000	26,000	896,000	.....	133,000	2,451,000
1923	1,485,000	16,000	1,109,000	.....	200,000	2,778,000
1924	1,481,000	17,000	1,197,000	4,000	156,000	2,821,000
1925	1,530,000	23,000	1,295,000	20,000	133,000	2,955,000
1926	1,684,000	19,000	1,658,000	94,000	100,000	3,517,000
1927	1,486,000	12,000	1,776,000	89,000	122,000	3,461,000
1928	1,418,000	11,000	1,926,000	114,000	116,000	3,563,000
1929	1,392,000	19,000	2,195,000	132,000	96,000	3,796,000
1930	1,282,000	10,000	1,989,000	156,000	134,000	3,551,000
1931	1,157,000	10,000	1,754,000	160,000	151,000	3,212,000
1932	1,009,000	8,000	1,533,000	114,000	144,000	2,793,000
1933	946,000	11,000	1,545,000	95,000	153,000	2,728,000
1934	961,000	23,000	1,956,000	107,000	147,000	3,148,000
1935	912,000	23,000	2,062,000	124,000	197,000	3,272,000
1936	921,000	15,000	2,422,000	87,000	243,000	3,658,000
1937	946,000	17,000	2,899,000	124,000	294,000	4,246,000
1938	820,000	6,000	1,938,000	94,000	243,000	3,089,000



Source: News Print Service Bureau.


TOTAL WOOD PULP PRODUCTION, CONSUMPTION, IMPORTS AND EXPORTS AND TOTAL PAPER PRODUCTION
OF THE UNITED STATES
MILLIONS OF TONS
MILLIONS OF TONS
U.S. PAPER PRODUCTION
WOOD PULP CONSUMPTION
TOTAL WOOD PULP PRODUCTION
WOOD PULP IMPORTS
WOOD PULP EXPORTS
0 1 2 3 4 5 6 7 8 9 10 11 12 13
1900 1905 1910 1915 1920 1925 1930 '32 '33 '34 '35 '36 '37 '38 '39
Sources for Paper Production - U.S. Bureau of the Census except
1924, 1926 & 1938 estimated by American Paper & Pulp Association
for Pulp Production - 1899-1937 U.S. Bureau of the Census
1938 estimated by U.S. Pulp Producers Association
Imports & Exports - U.S. Bureau of Foreign & Domestic Commerce
UNITED STATES PULP PRODUCERS ASSOCIATION

Foreign Pulp Supplied 75.34% Of U. S. Market in 1938

American producers sold 24.66% –
Increase of 3.98% over 1937–
Domestic sulphate pulp sales gain 19%

AMERICAN wood pulp producers increased their share of the domestic market in 1938 by 3.98 per cent, from 20.68 per cent of a total of 3,005,929 tons in 1937 to 24.66 per cent of a total of 2,257,261 tons in 1938 (soda pulp not included). The American pulp mills' share of the pulp sold in 1938 to United States paper mills, rayon yarn mills, manufacturers of transparent cellulose sheeting and to producers of plastics, amounted to 556,153 short tons as compared with 621,717 short tons in 1937 and 530,173 short tons in 1936 or 18.72 per cent of the total of 2,795,265 short tons sold in the United States in that year.

Foreign wood pulp producers furnished the American market with 1,701,108 short tons or 75.34 per cent of the total bought in 1938 as compared with 2,384,212 short tons or 79.32 per cent in 1937, and with 2,265,092 short tons or 81.28 per cent in 1936. (Soda pulp is not included in these comparisons as data on domestic sales of this grade were not available for publication prior to 1937. Sales of domestic soda pulp to domestic buyers in 1938 amounted to 71,147 as compared with 150,976 tons in 1937. Imports of soda pulp were 9,405 short tons in 1938 against 10,327 short tons in 1937).

● For the first time the U. S. Customs segregated the imports of rayon grade bleached sulphite pulp in reporting the imports for 1938. Likewise, the United States Pulp Producers Association made their first segregation. Domestic sales of rayon grade bleached sulphite pulp in 1938 amounted to 98,202 short tons and imports totaled 65,219 short tons. The rayon pulps have not been deducted in figuring the U. S. and foreign percentages although they are not sold to paper mills, because to deduct them would have prevented an accurate comparison of the foreign and domestic producers' share of the American pulp market with the percentages for previous years.

Had the 98,202 short tons been deducted from domestic sales and the 65,219 short tons subtracted from foreign sales, the share of the United States pulp producers' pulp bought by American PAPER MILLS would have been 457,951 short tons or 21.87 per cent of the total bought of 2,093,840 short tons. The foreign producers share would have been 78.13 per cent or 1,635,889 short tons.

The American Share

● Pulp mills in the United States making pulp for sale delivered 556,153 short tons to American paper mill customers in 1938. This was 65,564 short tons less, 10.54 per cent less, than the 621,717 short tons sold in 1937, but it was 25,980 short tons, 4.8 per cent, more than the 530,173 short tons sold in 1936.

Of the 556,153 short tons of wood pulp sold in 1938 to domestic paper mills by American pulp mills, 445,000 short tons were sulphites. In 1937 the sulphite sales were 543,607 short tons, so the 1938 sales were 98,607 short tons or 18 per cent less.

Bleached sulphite sales were 321,000 short tons in 1938 against 408,938 short tons in 1937, a decline of 87,938 short tons or 21.5 per cent. Unbleached sulphite sales in 1938 were 124,000 short tons against 134,669 short tons in 1937, a decline of 10,669 short tons or 7.9 per cent.

Of the bleached sulphite pulp sold 98,202 short tons was of rayon grade and was bought by American rayon yarn mills, manufacturers of

PROPORTION OF UNITED STATES MARKET FOR PULP SUPPLIED BY AMERICAN PULP MILLS AND FOREIGN PULP MILLS*—1936-1937-1938

Tons—2,000 Lbs.

TOTALS By Grades.	1936		1937		1938	
	Pulp Produced By U. S. Mills for Sale in Domestic Market—1936	Pulp Imported Into the United States 1936	Pulp Produced By U. S. Mills for Sale in Domestic Market—1937	Pulp Imported Into the United States 1937	Pulp Produced By U. S. Mills for Sale in Domestic Market—1938	Pulp Imported Into the United States 1938
Total—All Grades (Except Soda Pulp)[1]	530,173	2,265,092	772,693	2,394,539	692,142	1,710,513
Total—Sulphite	494,325	1,298,888	543,607	1,431,575	497,543	1,025,981
Bleached Sulphite	391,252	512,168	408,938	511,961	358,354	337,659
Other	----------	----------	----------	----------	102,424	65,219
Rayon	----------	----------	----------	----------	259,960	272,440
Unbleached Sulphite	103,073	786,720	134,669	919,614	140,189	688,322
Total—Sulphate	15,852	738,097	55,386	734,215	75,167	516,262
Bleached Sulphate	1,577	102,375	18,978	111,862	47,025	90,173
Unbleached Sulphate	14,275	635,722	36,408	622,353	28,013	426,082
Total Groundwood	18,568	227,778	20,720	218,422	30,203	158,865
Soda	-----	-----	100,976	10,327	72,990	9,405
Total—Miscellaneous, Damaged and Off-Quality	2,008	329	2,004	----	15,472	----------

*Table prepared by Pacific Pulp & Paper Industry from United States Pulp Producers Association data on wood pulp production, shipments and stocks; and from import data supplied by the Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce.
[1]Soda Pulp included in 1937 and 1938 figures only. Rayon figures included in 1938 figures only.

transparent cellulose sheeting and by plastic manufacturers. Paper making bleached sulphite pulp sold to paper mills amounted to 223,028 short tons in 1938.

Sales of sulphate pulps by domestic producers to American buyers in 1938 amounted to 65,923 short tons, an increase of 10,537 short tons or 19 per cent over the 55,386 short tons sold in 1937. The 1938 sulphate pulp sales consisted of 41,923 short tons of bleached sulphate pulp, a gain of 22,945 short tons or 120 per cent over the 18,978 short tons sold in 1937. Unbleached sulphate pulp sales of 24,000 short tons in 1938 showed a decline of 12,408 short tons or 34 per cent, from the 36,408 short tons sold in 1937.

Sales of groundwood pulp by American producers to domestic consumers in 1938 amounted to 30,000 short tons. This was a gain of 9,280 short tons or 44 per cent more than the 20,720 short tons sold in 1937.

Soda pulp, which is not included in the totals on this page, dropped in sales during 1938 to 71,147 short tons from 100,976 short tons in 1937, a decline of 29,829 short tons or 29.5 per cent.

The Foreign Share

• Imports of wood pulp were lower in 1938 than in 1937, declining to 1,710,513 short tons from 2,394,539 short tons, or 28 per cent. Bleached sulphite pulp imports were lower in 1938 than in 1937 by 174,301 short tons or 34 per cent, from 511,961 short tons in 1938 to 337,660 short tons last year. Of the 337,660 short tons of bleached sulphite imported in 1938, 65,219 short tons were of rayon grade and 272,441 short tons were for paper making.

Unbleached sulphite pulp imports amounted to 688,322 short tons in 1938, a drop of 231,292 short tons or 25 per cent from the record imports of 919,614 short tons in 1937.

Bleached sulphate pulp imports in 1938 amounted to 90,173 short tons, a decrease of 21,689 short tons from the 111,862 short tons imported in 1937, or 19.3 per cent.

Unbleached sulphate pulp imports totaled 426,089 short tons in 1938, a decrease of 196,264 short tons or 31.5 per cent from the 622,353 short tons imported in 1937.

Note: In the above comparison of the foreign and domestic pulp producers' shares of the American pulp market, inventories have not been taken into consideration. It is assumed that American buying mills have bought the pulp shipped by domestic pulp mills and the pulp imported from foreign producers.

Exact data on inventories is not available for publication. However, on February 1st, 1939, it was reported on good authority that total dock stocks at Atlantic and Lake ports of both foreign and domestic wood pulp amounted to approximately 325,000 short tons, 75,000 tons less than on February 1st, 1939.

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Wood Pulp Market In Australia

• Imports of chemical wood pulp into Australia increased approximately 44 per cent during the year ending June, 1938, compared with the corresponding period ending June, 1937. Imports in the two 12-month periods were as follows:

Item	1936-37 Tons	1937-38 Tons
Mechanical wood pulp	2,377	2,236
Chemical wood pulp	43,373	63,369
Other wood pulp	2,739	327

The principal suppliers of chemical wood pulp in 1937-1938 were: Sweden, 39,284 tons; United States, 11,810; and Finland, 8,563.

No wood pulp was produced in Australia during the calendar year 1938. Two new plants for the manufacture of wood pulp have been erected and are ready to start production. These are the Australian Paper and Pulp Company, Ltd., near Melbourne, and the Associated Pulp and Paper Mills, Ltd., at Burnie, Tasmania. Production has not been started as yet in either mill, but it is anticipated that before the end of 1939 production will be in full swing. (Office of the American Trade Commissioner, Sydney.)

Converted Paper Products Industries in United States

• Manufacturers of converted paper products in the United States reported a moderate increase in employment and considerable increases in wages and value of products for 1937 as compared with 1935, according to preliminary figures released by the Bureau of the Census. The number of establishments increased from 2,166 in 1935 to 2,212 in 1937. The amount paid out in wages increased from $102,123,007 in 1935 to $131,619,429 in 1937, while the value of products during these two years rose from $644,184,880 to $855,719,036.

Market for Wood Pulp To Expand in Peru

• Imports of wood pulp into Peru during 1937 amounted to only 830 metric tons, of which Sweden supplied 705 and Finalnd 125. Official import statistics do not classify the various types of wood pulp separately. According to reliable estimates, however, the following orders were placed for wood pulp during the year 1937: unbleached sulphate 500 tons; unbleached sulphite 726 tons, and bleached sulphite 451 tons.

Only one paper manufacturing company in Peru uses wood pulp at present, the other two companies depending upon locally obtained rags and waste paper for the manufacture of wrapping paper and paperboard.

The manufacture of paper by a recently formed company at Supe, Peru, is expected to get underway during the latter part of 1939. Sugar cane bagasse and waste paper mixed with imported wood pulp are expected to be the principal paper base stocks utilized. It is understood that once operations begin on a commercial scale imports of wood pulp will range between 1,500 and 2,500 tons annually, approximately 50 per cent of which will be sulphite, 45 per cent sulphate, and 5 per cent soda. (Office of the American Commercial Attache, Lima.)

●

In 1938 —

American Mills Bought 2,257,261 Tons of Wood Pulp

Of This Total FOREIGN Pulp Mills Supplied 1,701,108 Tons

Of This Total AMERICAN Pulp Mills Supplied 556,153 Tons

(Soda Pulp not included)



Imports of Pulp and Paper Declined in 1938

Wood pulp imports drop 28.5% while paper imports declined 31.4% in tonnage – Bleached sulphate pulp imports from Sweden rose 10% and Bleached sulphite pulp imports from Finland were up 12% in 1938 over 1937

IMPORTS into the United States of both pulp and paper declined in 1938 from the record levels of 1937, after showing a rise for three successive years.

Wood pulp imports, all grades, declined 28 per cent in volume, from 2,394,539 short tons in 1937 to 1,710,514 short tons in 1938. The 1938 imports were 684,025 tons or 28.5 per cent less.

The value of the 1938 pulp imports was $72,777,808 as compared with $98,269,213 in 1937, a drop of $25,491,405 or 25.9 per cent. In 1936 the pulp imports amounted to 2,277,829 short tons valued at $82,-881,000, while in 1935 the imports were 1,933,631 short tons worth $70,680,987.

The tonnage of wood pulp imported by the United States last year was the lowest since 1932 when 1,481,959 tons were imported. Value of the 1938 imports was higher, however, than any year since 1930, 1936 and 1937 excepted.

Chemical wood pulp imports totaled 1,531,649 short tons valued at $69,177,299 which was 644,468 less in tonnage and $24,549,646 less in value than the 2,176,117 tons valued at $93,926,945 imported in 1937. The decline in tonnage was 29.5 per cent and in value 26.3 per cent.

The 1938 imports of chemical wood pulp were less in tonnage than the 1,733,602 short tons imported in 1935 but the 1938 value of $69,-177,299 was higher than the 1935 value of $67,483,566.

"In 1937 chemical wood pulp imports reached a value of over $90,-000,000 for the first time, exceeding the previous high value in 1926 of $83,208,851 by $10,747,003. Over a period of fifteen years the annual value of chemical wood pulp has exceeded $80,000,000 in three different years and surpassed $70,000,000 in seven of the fifteen years. Although 1937 was but the second year that imports of chemical pulp have been more than two million tons, it was the eighth year during which they have exceeded a million and a half tons. This occurred in the years 1928, 1929, 1930, 1933, 1934, 1935, 1936 and 1937," from the 1938 Review Number.

In 1938 for the ninth year chemical wood pulp imports exceeded a million and a half tons.

Bleached Sulphite Shows Greatest Decline

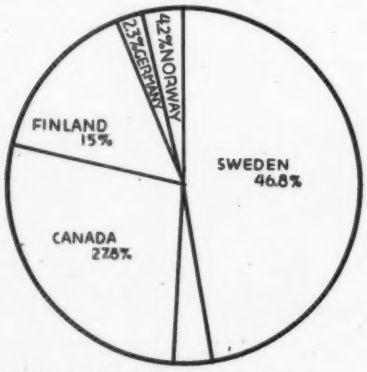
● Imports of bleached sulphite in 1938 declined more percentagewise than any other grade, followed by unbleached kraft, unbleached sulphite, groundwood and bleached sulphate in the order named.

Bleached sulphite imports last year were 337,660 short tons, a decline of 174,301 short tons or 34 per cent from the 1937 total of 511,961 short tons. For the first time the U. S. Customs Service segregated in the monthly reports the rayon and chemical grades of bleached sulphite from the paper making grades. The segregation began publicly in March but through the Bureau of Foreign and Domestic Commerce the rayon grade imports for the first two months of 1938 were obtained to provide a full year's record of the rayon grade imports, which totaled 65,219 short tons worth $5,651,548 or an average of $86.65 per ton, during 1938.

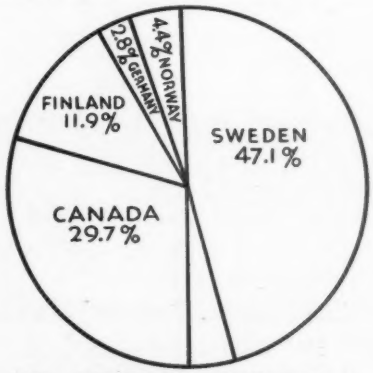
Imports of bleached sulphite pulp for paper making totaled 272,441 short tons valued at $14,451,396 in 1938. The value of all bleached sulphite pulp imported, both rayon and paper grades, was $20,102,944, as compared with a value in 1937 of $29,443,254. The drop in value was $9,340,310 or 31.7 per cent.

Unbleached Sulphite Imports

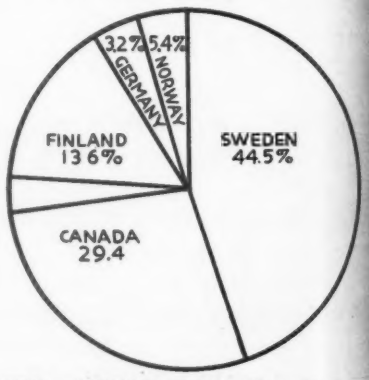
● Imports of unbleached sulphite pulp into the United States in 1938 amounted to 688,322 short tons valued at $26,883,449, a decline of 231,292 short tons and $7,779,604 in value, from the 1937 imports of 919,614 short tons valued at $34,-663,053. The decline was 25 per cent in tonnage and 22.4 per cent in value. Last year's value was higher than in any of the preceding six years with the exception of 1937. The tonnage imported in 1938 was the smallest in three years.



96% of 1938 U. S. Pulp Imports From Five Countries



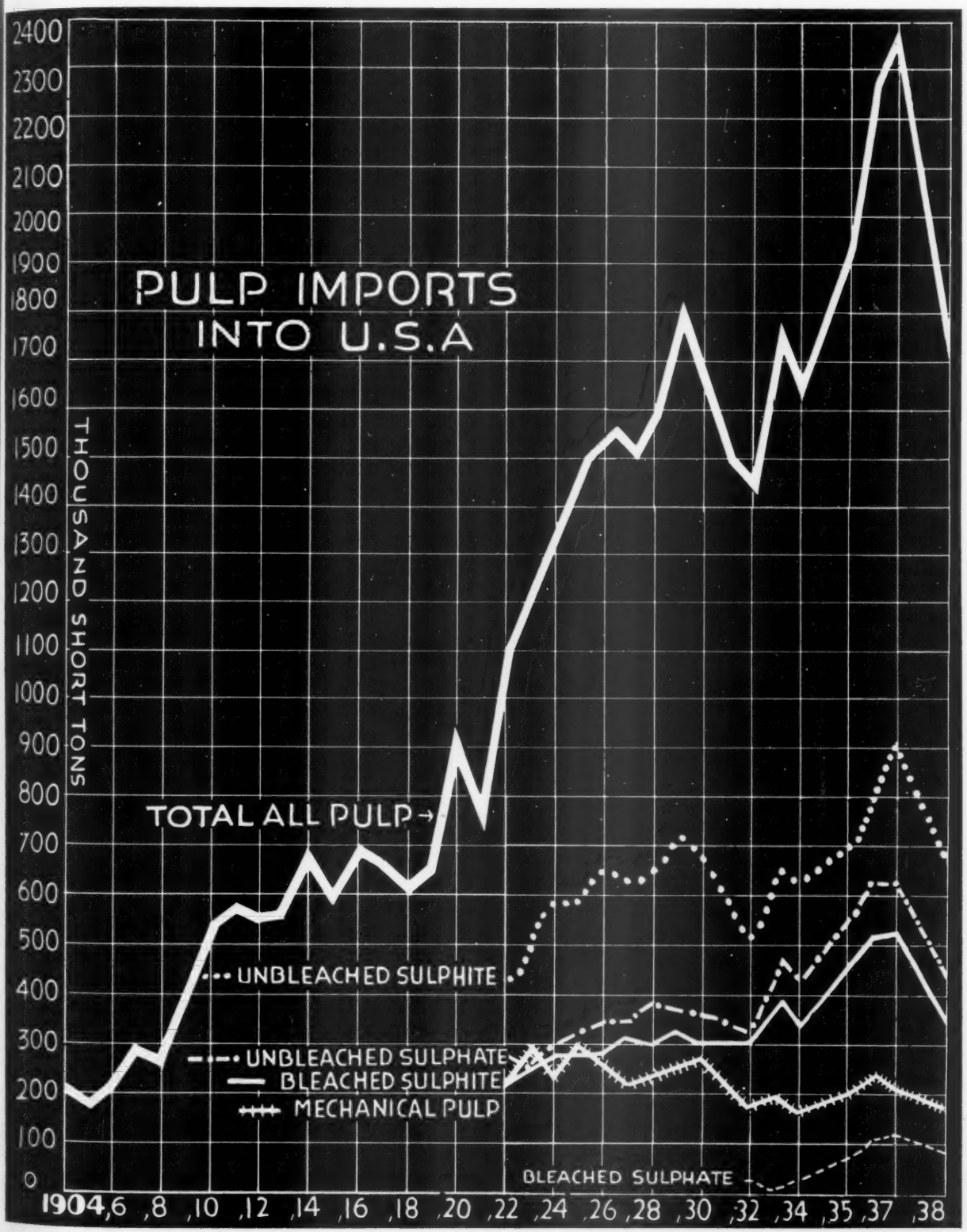
96% of 1937 U. S. Pulp Imports From Five Countries



96% of 1936 U. S. Pulp Imports From Five Countries

Bleached Kraft Imports

● Bleached sulphate pulp imports last year amounted to 90,173 short tons, valued at $5,463,598, a decrease in tonnage of 21,689 tons or 19.3 per cent, and a decrease in value of $1,550,852 or 22.1 per cent from the 111,862 tons valued at $7,014,450 imported in 1937. The average value of the 1938 bleached kraft pulp imports was $60.58 per ton compared with $62.70 a ton in 1937, $57.08 per ton in 1936 and $61.35 in 1935.



UNITED STATES

Wood Pulp Imports by Grades and Countries of Origin—1938
Short Tons

Grade	Countries of Origin												Total by Grades	
	Canada		Finland		Germany		Norway		Sweden		Others			
	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
Mechanical Wood Pulp														
Unbleached	122,216	$ 2,749,838	16,757	$ 374,807	.....	.....	514	$ 22,352	12,109	$ 283,491	.....	.....	151,596	$ 3,430,488
Bleached	.....	.....	115	2,378	.....	.....	.....	.....	7,154	167,643	.....	.....	7,269	170,021
Total	122,216	$ 2,749,838	16,872	$ 377,185	.....	.....	514	$ 22,352	19,263	$ 451,134	.....	.....	158,865	$ 3,600,509
Sulphite														
Unbleached	86,625	$ 3,284,962	117,167	$ 4,459,879	32,917	$1,134,006	4,892	$ 215,033	393,661	$15,789,088	53,060	$2,000,481	688,322	$26,883,449
Bleached														
Rayon	65,218	5,651,498	.....	.....	.....	.....	.....	.....	.....	.....	1	50	65,219	5,651,548
Other	101,806	5,412,047	53,201	2,700,287	5,051	247,179	52,589	3,022,265	44,822	2,306,103	14,972	763,515	272,441	14,451,396
Total	253,649	$14,348,507	170,368	$ 7,160,166	37,968	$1,381,185	57,481	$3,237,298	438,483	$18,095,191	67,853	$2,764,046	1,005,982	$46,986,393
Sulphate														
Unbleached	48,310	$ 2,281,973	68,922	$ 2,508,972	.....	.....	12,060	$ 495,393	296,129	$10,960,877	668	$ 16,464	426,089	$16,263,679
Bleached	33,992	2,287,011	2,617	165,614	.....	.....	310	16,227	53,254	2,994,746	.....	.....	90,173	5,463,598
Total	82,302	$ 4,568,984	71,539	$ 2,674,586	.....	.....	12,370	$ 511,620	349,383	$13,955,623	668	$ 16,464	516,262	$21,727,277
Soda	9,405	463,629	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,405	$ 463,629
Total	467,572	$22,130,958	258,779	$10,211,937	37,968	$1,381,185	70,365	$3,771,270	807,129	$32,501,948	68,701	$2,780,510	1,710,514	$72,777,808

Source: Import Statistics—U. S. Department of Commerce.

Unbleached Kraft Imports

● The imports of unbleached sulphate pulp in 1938 amounted to 426,089 short tons valued at $16,263,679. This was a drop of 196,264 tons, 31.5 per cent from the 622,353 tons imported in 1937, and $6,006,297 or 27 per cent from the 1937 value of $22,269,976. The average declared value was $38.12 per short ton as against $35.78 in 1937; $31.10 in 1936; $30.17 in 1935, and $28.31 in 1934.

Groundwood Imports Decline, Too

● Groundwood pulp imports of 158,865 short tons valued at $3,600,509 were the smallest of any year in the past seventeen years. The decline was 59,557 tons or 27.2 per cent and $741,659 or 17 per cent below the 1937 imports of 218,422 short tons valued at $4,342,168.

Soda Pulp Imports

● Imports of soda pulp in 1938 amounted to 9,405 short tons valued at $463,629, while in 1937 the imports were 10,327 short tons worth $536,212, a decline of 922 tons or 9 per cent and $72,583 or 13.5 per cent. In 1936 the soda pulp imports were 12,737 short tons worth $565,572 while in 1935 the soda pulp imports were 9,416 short tons worth $409,636.

Miscellaneous wood pulp imports totaled 41 short tons valued at $7,997.

Imports by Countries

● As in 1937 and in 1936, 96 per cent of the imports of wood pulp into the United States in 1938 came from five countries, Sweden, Canada, Finland, Norway and Germany. Sweden supplied 46.8 per cent of the total imports in 1938 against 47.1 per cent in 1937 and 44.5 per cent in 1936. Canada furnished 27.8 per cent of the total imports in 1938 as compared with 29.7 per cent in 1937 and 29.4 per cent in 1936. Finland supplied 15 per cent of the imported pulp in 1938 while that country sent but 11.9 per cent in 1937 and 13.6 per cent in 1936. Norway sent 4.2 per cent in 1938 against 4.4 per cent and 5.4 per cent in 1937 and 1936 respectively. Imports from Germany totaled 2.3 per cent in 1938 while in 1937 the total from that country took up 2.8 per cent and in 1936 3.2 per cent.

UNITED STATES

Imports of Unbleached Sulphite—1920 to 1938

(Long Tons—2,240 Pounds)

	Sweden	Canada	Finland	Germany	Norway	All Others	Total
1920	73,957	207,667	13,502	7,193	3,627	2,062	308,008
1921	73,070	88,112	24,696	14,308	3,137	4,770	208,093
1922	193,218	146,690	27,642	16,968	29,134	4,048	422,700
1923	159,065	167,725	58,602	42,851	21,222	12,388	461,853
1924	226,978	192,308	48,007	54,944	26,079	13,554	561,920
1925	193,034	253,670	48,996	42,362	20,639	20,083	579,284
1926	244,925	226,153	61,804	54,305	18,613	23,123	628,923
1927	299,875	179,630	70,106	25,487	17,747	21,011	613,856
1928	297,130	179,751	92,778	23,933	23,456	23,607	640,660
1929	350,152	190,565	109,121	16,822	18,325	16,471	701,456
1930	331,968	180,417	99,881	19,049	20,210	14,152	665,075
1931	300,682	88,604	97,467	22,212	10,195	16,850	536,010
1932	270,894	56,335	95,579	42,330	31,402	19,667	516,207
1933	346,684	76,537	116,019	43,895	26,597	33,271	643,003
1934	314,984	80,867	112,562	47,319	22,529	24,856	603,117
1935-38 IMPORTS IN TONS OF 2,000 LBS.							
1935	377,320	67,404	146,166	50,024	16,539	35,573	693,026
1936	425,753	89,359	157,324	39,871	25,391	49,022	786,720
1937	539,488	128,469	123,112	32,740	28,479	67,326	919,614
1938	393,661	86,625	117,167	32,917	4,892	53,060	668,322

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.

U. S. WOOD PULP IMPORTS

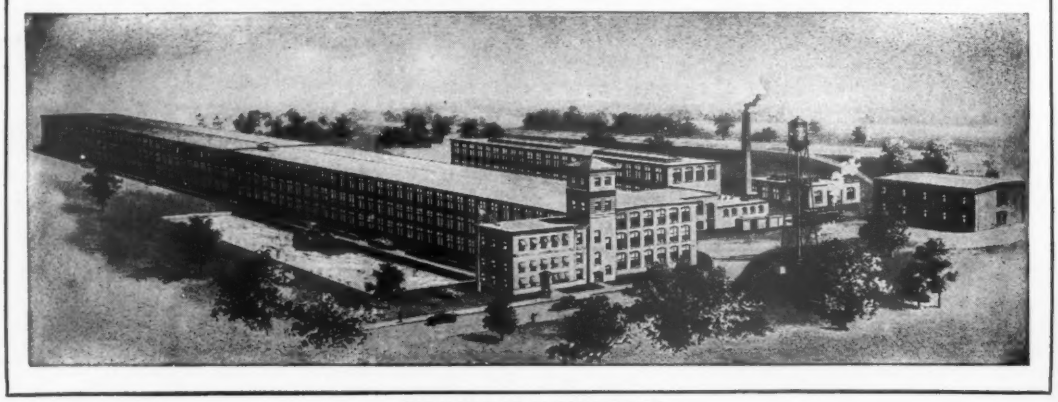
Quantity and Value

1922-1938

	Total Bleached Sulphite		Bleached Sulphite Rayon and Special Chemical Grades*		Unbleached Sulphite		Unbleached Sulphate		Bleached Sulphate	
	Long Tons	Value	Long Tons	Value	Long Tons	Value	Long Tons	Value	Long Tons	Value
1938	334,283	$20,102,944	59,284	$5,651,548	607,504	$26,883,449	387,314	$16,263,679	81,967	$5,463,598
1937	465,372	29,443,254	.....	.....	835,929	34,663,053	565,718	22,269,976	101,682	7,014,450
1936	465,607	25,824,769	.....	.....	715,128	26,778,644	568,827	19,771,988	93,059	5,844,031
1935	383,475	21,934,054	.....	.....	618,872	24,026,340	470,329	15,893,593	75,600	5,193,789
1934	355,484	19,415,304	.....	.....	603,117	21,791,584	429,853	13,733,776	48,275	3,334,713
1933	400,633	19,138,468	.....	.....	643,003	19,946,124	461,890	12,568,367	36,622	2,361,882
1932	311,046	14,727,214	.....	.....	508,088	17,047,669	310,659	9,818,674	23,366	1,975,720
1931	319,518	18,887,719	.....	.....	540,478	23,033,069	344,612	12,035,030	29,683	2,267,090
1930	322,886	22,721,929	.....	.....	665,049	33,193,598	357,551	16,452,381	19,533	1,468,599
1929	334,235	25,338,603	.....	.....	701,456	35,328,982	384,005	20,518,676	15,364	1,139,820
1938	307,771	23,268,421	.....	.....	640,660	32,587,134	381,256	21,170,948	14,590	894,587
1927	311,130	24,224,626	.....	.....	613,856	23,262,845	341,162	20,684,298	10,789	708,712
1926	294,818	23,677,929	.....	.....	628,923	37,032,470	334,803	21,193,459	16,147	1,048,662
1925	286,976	22,527,879	.....	.....	579,284	31,542,079	306,073	18,257,446	17,419	989,933
1924	272,370	21,006,429	.....	.....	562,020	30,092,530	277,994	15,904,350	27,613	1,549,629
1923	250,580	22,245,868	.....	.....	461,853	26,548,431	233,696	15,228,747	15,422	1,080,961
1922	213,093	17,996,401	.....	.....	422,700	22,297,283	275,504	16,085,121	19,440	1,169,570

	Total, All Chemical Pulp		Mechanical Pulp		Total, All Grades Wood Pulp	
	Long Tons	Value	Long Tons	Value	Long Tons	Value
1938	1,410,449	$69,177,299	144,408	$3,600,509	1,554,857	$72,777,808
1937	1,968,701	93,390,733	198,545	4,342,168	2,167,246	97,732,901
1936	1,842,621	78,839,776	207,050	4,051,224	2,070,547	82,891,000
1935	1,557,026	67,403,602	169,707	3,277,385	1,726,732	70,680,987
1934	1,443,351	58,605,219	169,084	3,245,050	1,612,615	61,850,269
1933	1,545,994	54,184,091	187,750	3,214,919	1,733,744	57,399,010
1932	1,154,907	43,652,916	168,272	3,268,457	1,323,179	46,921,373
1931	1,237,600	56,409,638	188,086	4,498,022	1,425,686	60,907,660
1930	1,369,327	74,140,504	267,193	7,146,290	1,636,520	81,286,794
1929	1,441,110	82,840,220	244,162	6,245,776	1,785,272	89,085,996
1928	1,351,005	78,476,280	222,499	5,443,495	1,573,504	83,919,775
1927	1,280,285	80,124,449	219,285	5,961,821	1,499,570	86,086,270
1926	1,278,548	83,208,851	271,213	8,278,220	1,549,761	91,487,071
1925	1,191,875	73,469,063	295,618	8,517,116	1,487,493	81,986,179
1924	1,142,123	68,678,210	219,571	7,190,129	1,361,694	75,868,339
1923	967,869	65,495,800	267,527	9,280,863	1,235,396	74,776,663
1922	931,992	57,600,844	192,688	5,706,529	1,124,680	63,307,373

Source: U S. Department of Commerce.



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Book
Chip Board
News Board
Cover
Kraft
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Manila
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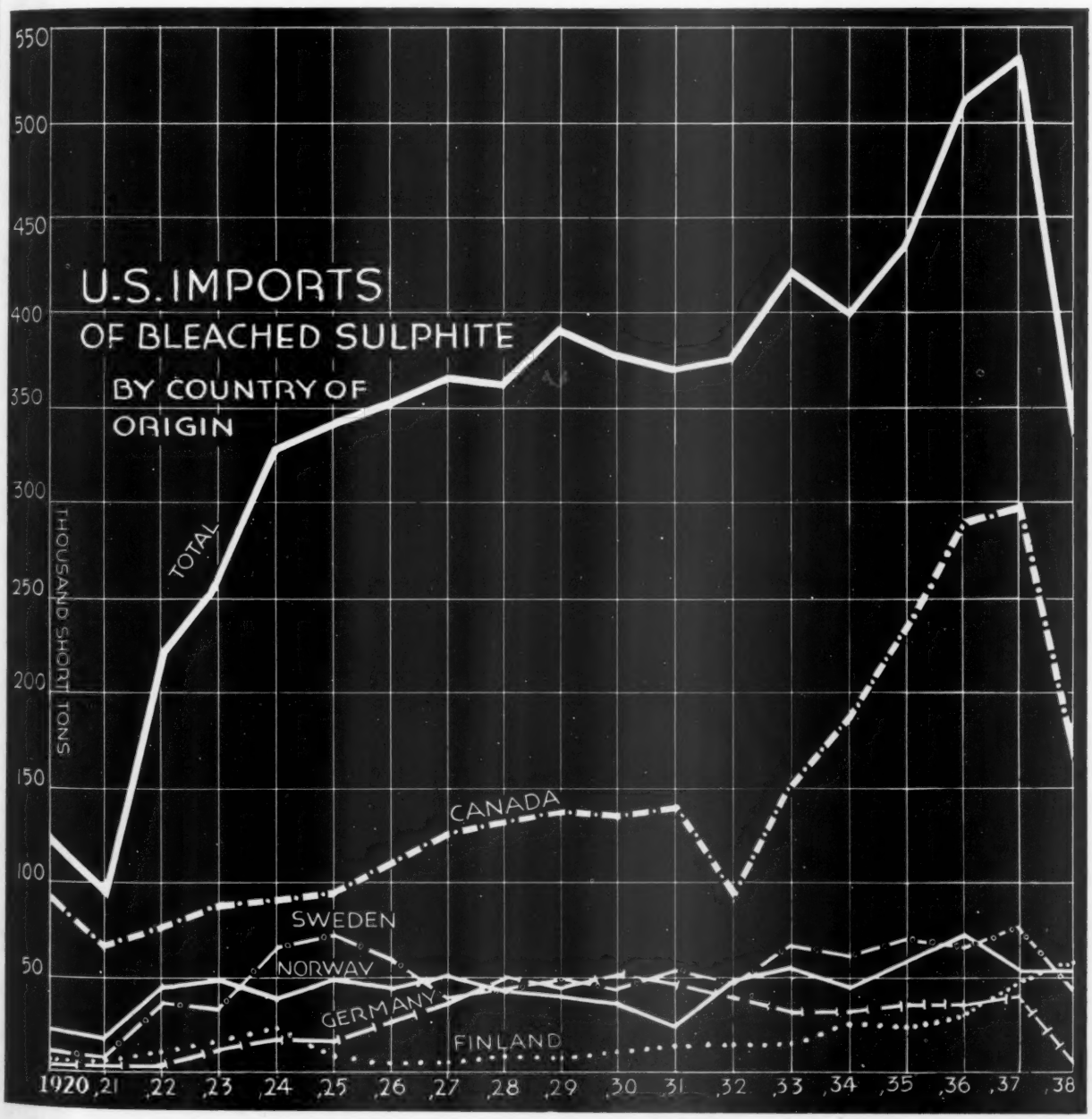
UNITED STATES

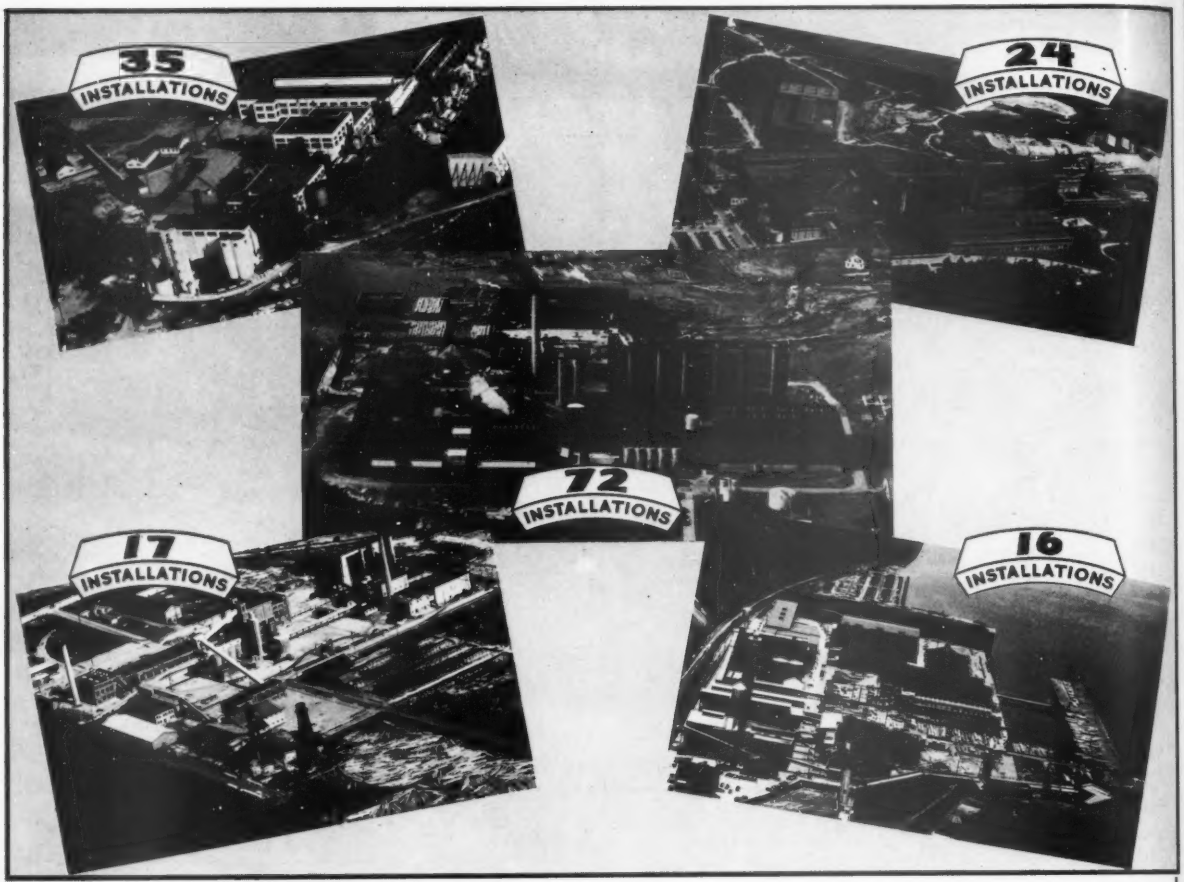
Imports of Bleached Sulphate Pulp—By Countries of Origin—1930-1938

(Long Tons of 2,240 Lbs.)

	Canada	Finland	Germany	Norway	Sweden	Others	Total
1930	12,505	2,445	256	.....	.....	387	22,108
1931	22,940	2,263	160	28	7,851	.....	33,242
1932	19,872	1,522	.....	324	1,648	.....	23,366
1933	24,778	2,249	.....	242	9,159	.....	36,428
1934	30,804	2,740	.....	452	14,279	.....	48,275
1935-38 IMPORTS IN TONS OF 2,000 LBS.							
1935	51,199	4,113	.....	28	29,262	56	84,658
1936	55,244	5,440	.....	230	41,461	.....	102,375
1937	55,212	9,200	.....	.....	47,450	.....	111,862
1938	33,992	2,617	.....	310	53,254	.....	90,173

Source—Department of Commerce, Bureau of Foreign and Domestic Commerce.





A TOTAL OF 164 STEBBINS LININGS IN 5 PLANTS IS PROOF POSITIVE OF THE SATISFACTION THEY GIVE

Stebbins Acid and Corrosion-Resisting Linings for a wide variety of vessels and tanks are in use in a large majority of the leading pulp and paper mills on the North American continent. In some mills only a few Stebbins Linings are installed, while in others Stebbins Linings are used practically exclusively and it is significant to note that over 90% of all the sulphite digesters in the country are Stebbins lined.

In the five West Coast plants shown above, a total of 164 Stebbins Linings are installed and the number is constantly increasing. This is convincing evidence of the superiority of Stebbins Linings and the long, efficient, economical and trouble-free service their use assures.

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Stebbins Engineering Corporation

TEXTILE TOWER SEATTLE, WASHINGTON

UNITED STATES

Imports of Bleached Sulphite from 1920 to 1938

By Countries of Origin

(Long Tons of 2,240 Pounds)

Countries—	Canada	Sweden	Germany	Norway	Finland	All Others	Total
1920	86,055	6,788	200	13,435	5,329	2,663	114,470
1921	59,198	5,770	1,335	8,180	7,591	2,931	85,005
1922	122,347	39,340	3,152	39,153	5,393	3,708	213,093
1923	132,138	41,958	12,655	46,849	12,063	4,917	250,580
1924	135,943	64,221	17,054	35,279	6,960	12,912	272,369
1925	137,598	71,577	16,662	48,111	4,130	8,898	286,976
1926	152,764	58,623	25,944	45,416	2,739	9,332	294,818
1927	171,280	46,369	25,341	49,928	4,595	13,617	311,138
1928	176,807	36,237	39,592	40,212	1,500	13,578	307,926
1929	187,469	47,199	45,471	39,312	7,306	7,478	334,235
1930	181,195	43,916	46,101	36,758	7,335	7,358	322,693
1931	185,037	49,063	47,155	18,011	8,922	7,923	316,111
1932	150,589	46,735	38,185	46,971	11,708	24,340	318,528
1933	194,754	65,264	32,564	56,303	22,420	29,328	400,633
1934	179,320	59,253	34,661	46,878	20,054	15,318	355,484
1935-1938 IMPORTS IN TONS OF 2,000 LBS.							
1935	225,773	69,237	30,231	52,407	29,550	22,225	429,423
1936	281,062	67,309	34,792	70,950	31,131	26,924	512,168
1937	286,504	62,100	35,996	55,614	47,433	24,214	511,961
1938	167,024*	44,822	5,051	52,589	53,201	14,972	337,660

Source—Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce.
*Includes 65,218 tons Rayon pulp.

UNITED STATES

Imports of Bleached and Unbleached Sulphate—1920 to 1938

By Countries of Origin

(Long Tons of 2,240 Pounds)

Countries:	Sweden	Canada	Finland	Norway	All Others	Total
1920	25,012	114,175	7,762	3,363	1,236	178,548
1921	57,702	89,729	5,799	522	2,733	159,006
1922	122,545	137,307	23,631	8,850	2,611	294,944
1923	84,739	131,304	20,089	10,258	2,728	249,118
1924	144,148	125,256	17,749	13,080	5,474	305,707
1925	159,282	127,567	21,170	10,568	4,635	323,222
1926	169,810	140,625	25,006	11,798	3,711	350,950
1927	180,897	138,660	19,602	10,690	2,102	351,951
1928	201,757	141,779	32,139	15,761	4,410	395,846
1929	227,760	116,290	31,907	17,079	6,333	399,639
1930	247,361	76,334	35,427	13,072	3,677	338,714
1931	259,238	52,700	55,692	4,385	6,183	378,198
1932	227,226	37,283	45,278	13,285	1,798	324,870
1933	375,583	54,412	49,288	16,513	2,612	498,408
1934	332,019	77,017	52,367	14,263	2,462	478,128
1935-38 IMPORTS IN TONS OF 2,000 LBS.						
1935	429,916	94,748	66,286	17,356	3,036	611,342
1936	499,373	117,460	92,765	23,544	4,955	738,097
1937	501,499	114,053	97,927	17,798	2,938	734,215
1938	349,383	82,302	71,539	12,370	668	516,262

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.

PACIFIC COAST PULP IMPORTS
1938

(Short Tons—Value)

Customs District.	Unbleached Sulphite Tons	Unbleached Sulphite Value	Bleached Sulphite Tons	Bleached Sulphite Value	Unbleached Sulphate Tons	Unbleached Sulphate Value	Unbleached Groundwood Tons	Unbleached Groundwood Value	Bleached Groundwood Tons	Bleached Groundwood Value	TOTALS Tons	TOTALS Value
Los Angeles	7,402	$265,335	99	$4,858	4,219	$156,683	1,374	$20,759	1,453	$35,450	14,547	$483,085
San Francisco	5,208	151,296	6	291	2,457	66,276	581	10,735	.....	.....	8,252	228,598
Oregon	.....	.....	.....	.....	675	19,134	.....	.....	.....	.....	675	19,134
Washington	7,520	196,625	12,371*	581,796	634	18,414	.....	.....	.....	.....	20,525	796,835
Totals	20,130	$613,256	12,476	$586,945	7,985	$260,507	1,955	$31,494	1,453	$35,450	43,999	$1,527,652

* Includes 204 tons, value $13,966 of Rayon and Special Chemical Grades.
112 tons of Bleached sulphate, value $5,859, entered Los Angeles Customs District during 1938.
Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.

DYESTUFFS

FOR THE PAPER MILL

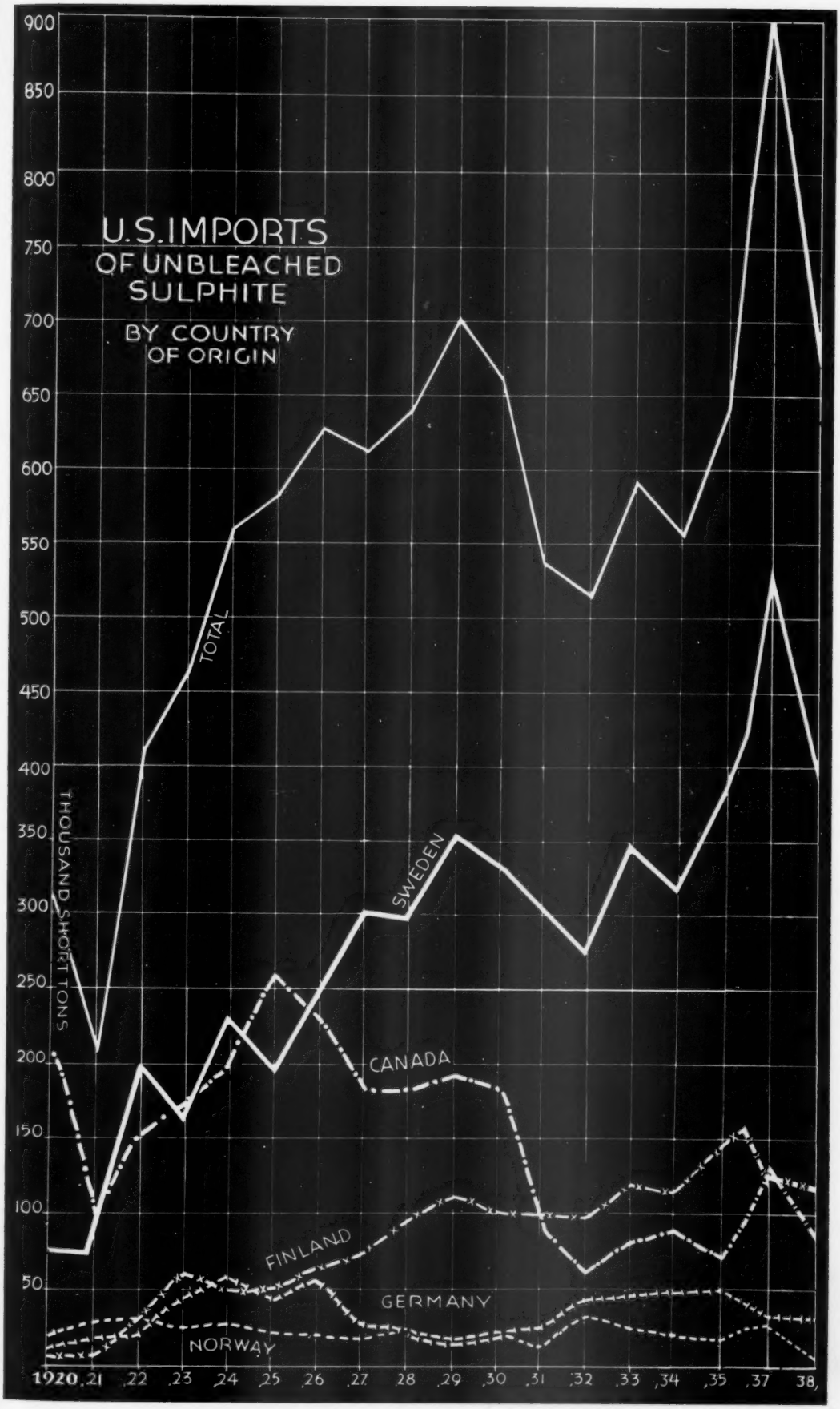
. . . Be sure that you buy dyestuffs that are standardized for paper. The General Dyestuff Corporation offers a complete range of dyestuffs which are particularly suited to paper mill application . . . . . .

GDC

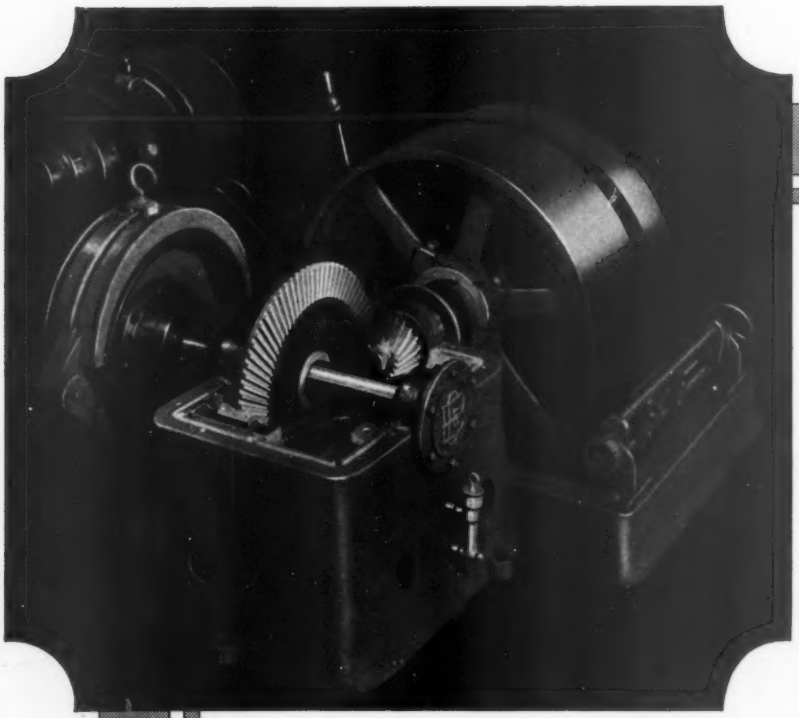
GENERAL DYESTUFF CORPORATION

435 HUDSON STREET, NEW YORK, N. Y.

Boston Chicago Charlotte Philadelphia Providence San Francisco


U.S. IMPORTS
OF UNBLEACHED
SULPHITE
BY COUNTRY
OF ORIGIN
THOUSAND SHORT TONS
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
TOTAL
SWEDEN
CANADA
FINLAND
GERMANY
NORWAY
1920
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
37
38

Two Strikes on This Drive Right at the Start



"Vibration caused by the wobbly floor under that Black-Clawson drive will tear it to pieces in two weeks." It was ten years ago when the superintendent of a mid-western board mill made that remark. But despite the hopelessly shaky foundation, that B-C spiral drive *is still operating with all its original smoothness.*

Imagine, after ten years that "doomed" drive is still going strong. Why? Because Black-Clawson drives are built with extra precision . . . with each part making its contribution to effortless and vibrationless performance.

In the construction of a B-C drive, jigs are used whenever possible. The base is of heavy, one-piece construction, gears are spiral bevel, bearings are of the anti-friction type, and both pulley and gears are statically and dynamically balanced. Pinion and drive-in shafts are extra sturdy, the flange coupling is machined over all, and the bearings are oiled automatically.

Then to make certain that it will function perfectly in service, the B-C drive is actually tested under heavy brake loads on the shop floor prior to shipment.

Black-Clawson spiral and hypoid drives are built in both large and medium sizes. Hundreds of them in service, one mill alone having some 65. Write for prices and complete details. The Black-Clawson Co., Hamilton, Ohio, owners of Shartle Brothers.

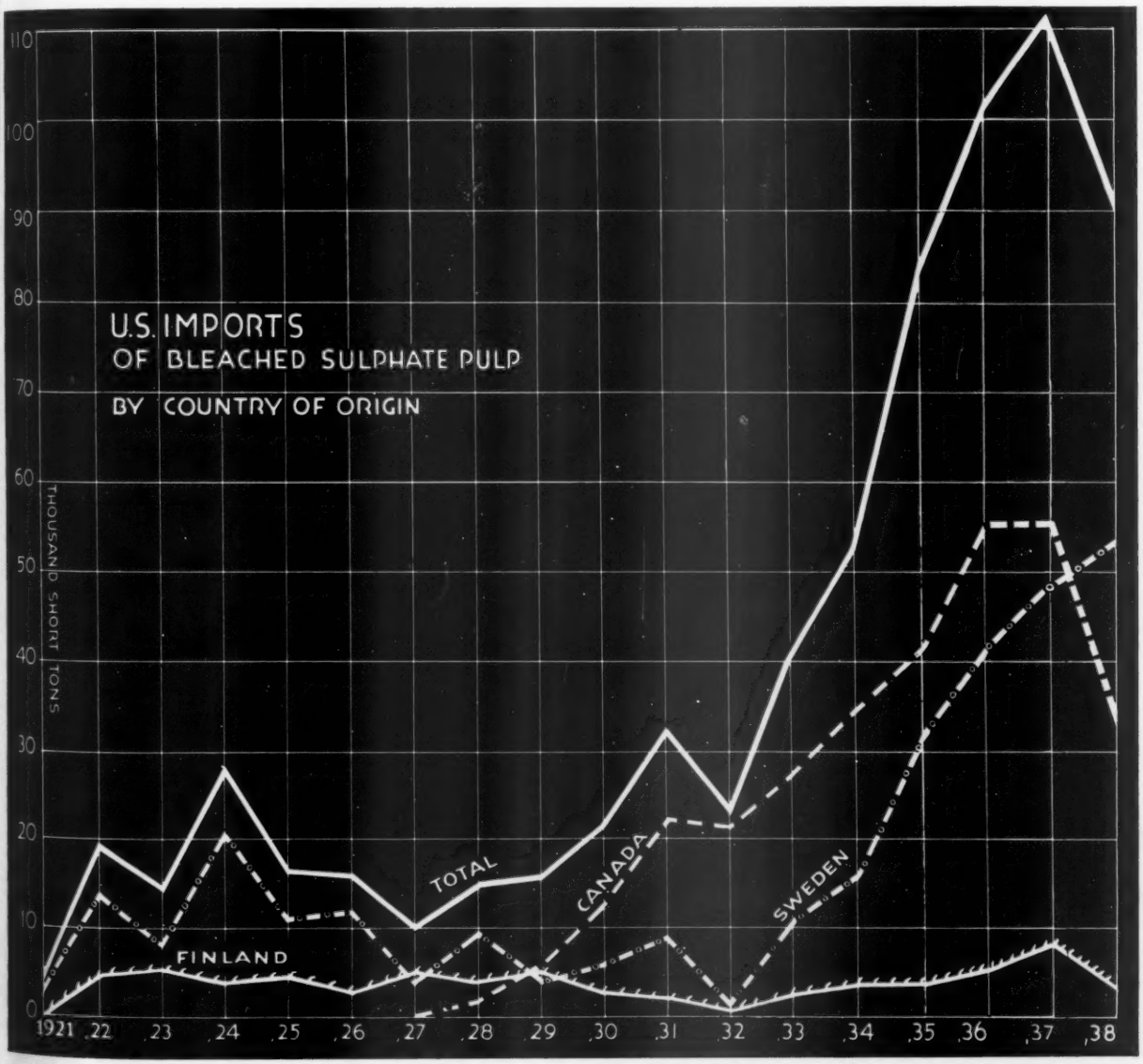
BLACK-CLAWSON

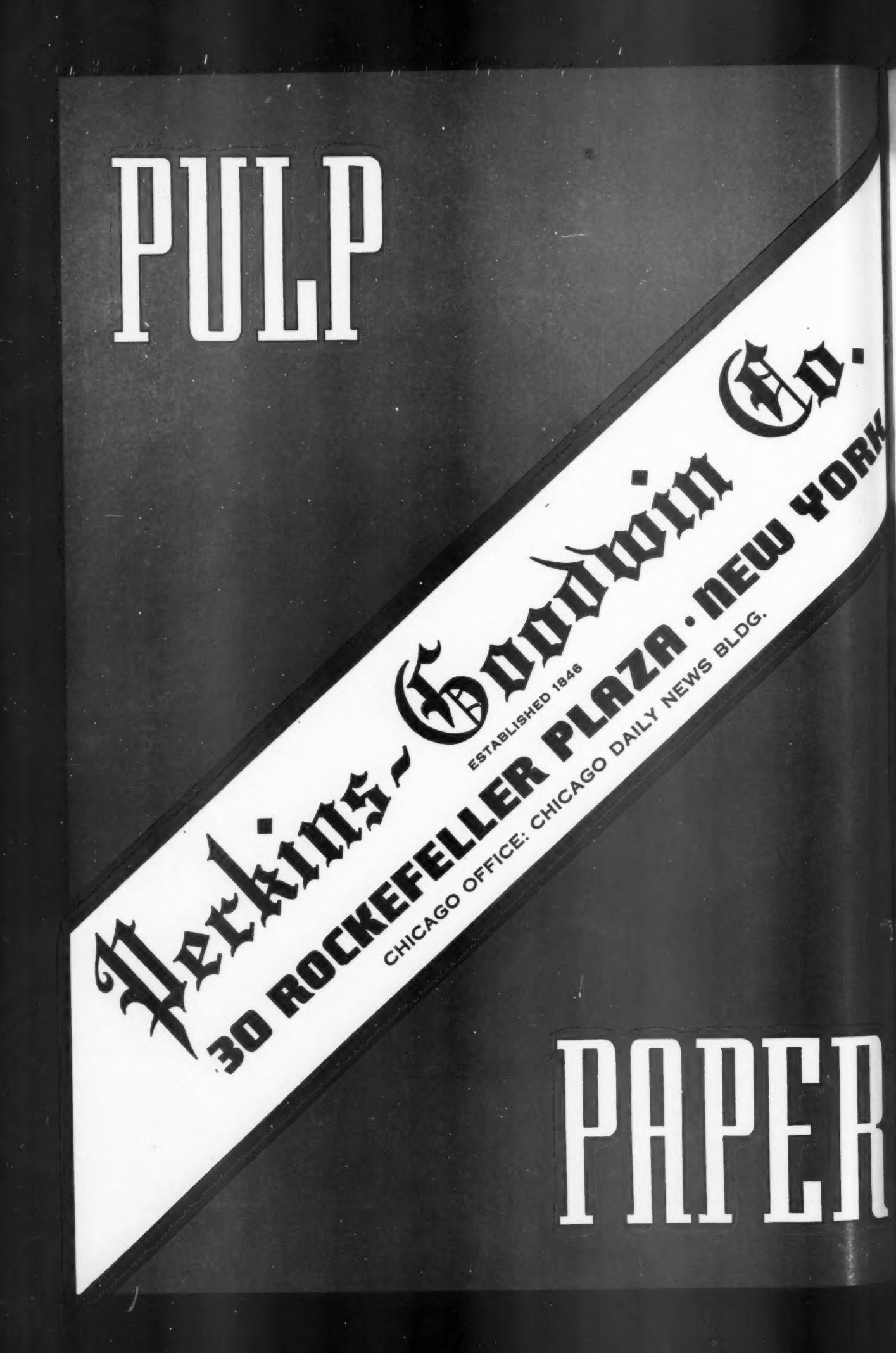
UNITED STATES

Wood Pulp Imports by Grades and Countries of Origin—1937
Short Tons

Grade	Countries of Origin												Total by Grades	
	Canada		Finland		Germany		Norway		Sweden		Others			
	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
Mechanical Wood Pulp														
Unbleached	172,825	$3,324,112	15,374	$334,117	——	——	769	$20,597	14,529	$344,413	——	——	203,497	$4,023,239
Bleached	——	——	2,148	44,842	——	——	318	8,413	12,459	265,674	——	——	14,925	318,929
Total	172,825	$3,324,122	17,522	$378,959	——	——	1,087	$29,010	26,988	$610,087	——	——	218,422	$4,342,168
Sulphite														
Unbleached	128,469	$5,330,953	123,112	$4,516,734	32,740	$1,105,187	28,479	$1,312,882	539,488	$19,974,146	67,326	$2,423,151	919,614	$34,663,053
Bleached	286,504	17,733,328	47,433	2,410,792	35,996	1,683,094	55,614	3,035,224	62,100	3,222,167	24,314	1,358,649	511,961	29,443,254
Total	414,973	$23,064,281	170,545	$6,927,526	68,736	$2,788,281	84,093	$4,348,106	601,588	$23,196,313	91,640	$3,781,800	1,431,575	$64,106,307
Sulphate														
Unbleached	58,841	$2,418,464	88,727	$3,194,752	324	$15,989	17,798	$720,343	454,049	$15,856,358	2,614	$64,070	622,353	$22,269,976
Bleached	55,212	3,689,768	9,200	555,306	——	——	——	——	47,450	2,769,376	.....	.....	111,862	7,014,450
Total	114,053	$6,108,232	97,927	$3,750,058	324	$15,989	17,798	$720,343	501,499	$18,625,734	2,614	$64,070	734,215	$29,284,426
Soda	10,321	$535,898	——	——	——	——	——	——	——	——	6	$314	10,327	$536,212
Total	712,172	$33,032,523	285,994	$11,056,543	69,060	$2,804,270	102,978	$5,097,459	1,130,075	$42,432,134	94,260	$3,846,284	2,394,539	$98,269,213

Source: Import Statistics—U S. Department of Commerce




PULP
Perkins-Goodwin Co.
ESTABLISHED 1846
30 ROCKEFELLER PLAZA · NEW YORK
CHICAGO OFFICE: CHICAGO DAILY NEWS BLDG.
PAPER

PAPER AND PULP IMPORTS OF THE UNITED STATES

For the Twelve Months Ending Dec. 31, 1937 and 1938

PAPER IMPORTS

Articles—		12 Months, Ending Dec., 1937 Quantity	12 Months, Ending Dec., 1937 Dollars	12 Months, Ending Dec., 1938 Quantity	12 Months, Ending Dec., 1938 Dollars
Paper and Manufacturers		.....	127,069,991	.....	112,978,458
Printing Paper—					
Standard Newsprint, free	1000 lbs.	6,634,048	122,529,421	4,549,248	101,455,671
Other, n.e.s., dut.	lbs.	30,909,847	714,866	19,016,853	532,512
Grease and waterproof, dut.	lbs.	1,460,158	211,321	795,883	139,701
Kraft wrapping, dut.	lbs.	33,227,694	1,177,176	26,600,848	1,013,797
Other wrapping, dut.	lbs.	2,956,319	76,401	1,346,273	60,162
Writing and drawing, dut.	lbs.	1,537,094	445,346	968,392	283,597
Paper and envelope combinations, dut.		.....	71,346	.....	44,850
Surface coated, dut.	lbs.	1,756,023	723,448	1,434,114	567,269
Uncoated, decorated, embossed, dut.	lbs.	21,132	13,843	32,650	13,890
Tissue and Similar Papers—					
Not over 6 pounds to the ream, dut.	lbs.	1,599,646	873,586	997,193	630,122
Other, dut.	lbs.	648,123	328,482	381,230	180,440
Pulpboard, in rolls, dut.	lbs.	23,008,735	492,011	19,624,974	385,554
Paperboard, pulpboard, n.e.s., cardboard-leatherboard, etc., dut.	lbs.	52,154,648	1,198,205	32,897,739	847,398
Cigarette Paper, dut.	lbs.	16,010,768	3,874,925	15,438,267	3,873,994
Cigarette books and covers, dut.	lbs.	1,219,638	352,378	1,143,030	295,081
Hanging paper (wall paper), dut.	lbs.	6,748,184	440,777	630,840	163,964
Duplex, decalcomania, not printed, free	lbs.	734,963	159,155	418,516	88,392
Paper boxes, dut.	lbs.	872,154	420,393	501,803	237,084
Paper machi and pulp manufacturers, dut.		.....	448,733	.....	372,396
Other paper and manufacturers, dut.		.....	2,594,240	.....	1,792,584

PAPER BASE STOCK IMPORTS

Articles—		12 Months, Ending Dec., 1937 Quantity	12 Months, Ending Dec., 1937 Dollars	12 Months, Ending Dec., 1938 Quantity	12 Months, Ending Dec., 1938 Dollars
Paper Base Stocks		.....	117,852,607	.....	86,354,332
Pulpwood	cords	1,522,868	12,393,547	1,293,930	11,038,380
Rough:					
Spruce, free	cords	197,368	1,557,601	146,843	1,176,853
Other, free	cords	77,102	460,656	143,610	1,052,727
Peeled:					
Spruce, free	cords	1,013,916	8,926,107	786,958	7,500,591
Other, free	cords	171,771	1,076,208	162,749	1,030,696
Rossed:					
Spruce, free	cords	24,309	290,316	15,636	223,113
Other, free	cords	.....	.....	.....	.....
Chipped, free	cords	38,402	82,569	38,142	54,400
Wood and Other Pulp: (Ton, 2,000 pounds, air-dry weight)					
Wood Pulp	tons	2,394,699	98,298,022	1,722,346	72,766,183
Mechanically ground wood pulp:					
Unbleached, free	tons	203,583	4,026,156	163,201	3,422,348
Bleached, free	tons	14,839	316,012	7,269	170,021
Sulphite Wood Pulp:					
Unbleached, free	tons	919,614	34,663,053	688,189	26,883,449
Bleached, free	tons	511,961	29,443,254	337,659	20,102,944
Sulphate Wood Pulp:					
Unbleached, free	tons	622,353	22,269,976	426,450	16,260,194
Bleached, free	tons	111,862	7,014,450	90,173	5,463,598
Soda pulp, free	tons	10,327	536,212	9,405	463,629
Other pulp, free	tons	160	28,909	41	7,997
Rags for paper stock, free	lbs.	244,325,164	4,475,402	80,027,890	1,264,604
All other paper stock, free	lbs.	116,740,159	2,685,726	78,356,231	1,277,168

●

PACIFIC COAST PAPER IMPORTS
1938

(Short Tons — Value)

Customs District.	Newsprint Tons	Newsprint Value	Greaseproof & Waterproof Tons	Greaseproof & Waterproof Value	Kraft Wrapping Tons	Kraft Wrapping Value	Other Wrapping Tons	Other Wrapping Value	TOTALS Tons	TOTALS Value
San Diego	6,943	$267,669	646 lbs.	$202	.....	.....	.....	.....	6,943	$267,871
Los Angeles	48,394	2,129,711	.....	.....	318	$31,329	1	224	48,713	2,161,264
San Francisco	49,297	2,068,821	2	1,863	68	5,127	10	1,329	49,377	2,077,140
Oregon	3,417	114,033	.....	.....	.....	.....	.....	.....	3,417	114,033
Washington	38,282	1,744,099	.....	.....	.....	.....	1	228	38,283	1,744,327
Alaska	78	3,809	.....	.....	.....	.....	.....	.....	78	3,809
Hawaii	3,103	144,747	.....	.....	.....	.....	3	1,334	3,106	146,081
Totals	149,514	$6,472,889	2	$2,065	386	$36,456	15	$3,115	149,917	$6,514,625

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.



Oceans of Superheated Water
To Produce
Mountains of Sulphur

The mining of Sulphur in this country is no "gopher-hole" proposition. It is a huge enterprise calling for a very large investment in plant equipment in order to "mine" this essential raw material economically and to assure process plants of an unfailing supply.

Take, for example, the vitally important matter of superheated water which is the "powder" that releases the Sulphur from its matrix. To maintain its steady production of over 3000 tons daily, Texas Gulf superheats millions of gallons of chemically-treated water each day. The investment in this item alone is tremendous.

• • • •

Research is an important phase of Texas Gulf's service. Recently it was shown that Sulphur could be plasticized. This form of Sulphur is now being adapted for use in the construction of roads and industrial floors, and for jointing water and sewer pipes. The insolubility and inertness of Sulphur make it well-suited for such installations.



Visitors to the New York World's Fair will have an opportunity to learn about SULPHUR at an interesting educational display in the Hall of Industrial Science.

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TEXAS GULF SULPHUR CO.
75 E. 45th Street New York City
Mines: Newgulf and Long Point, Texas

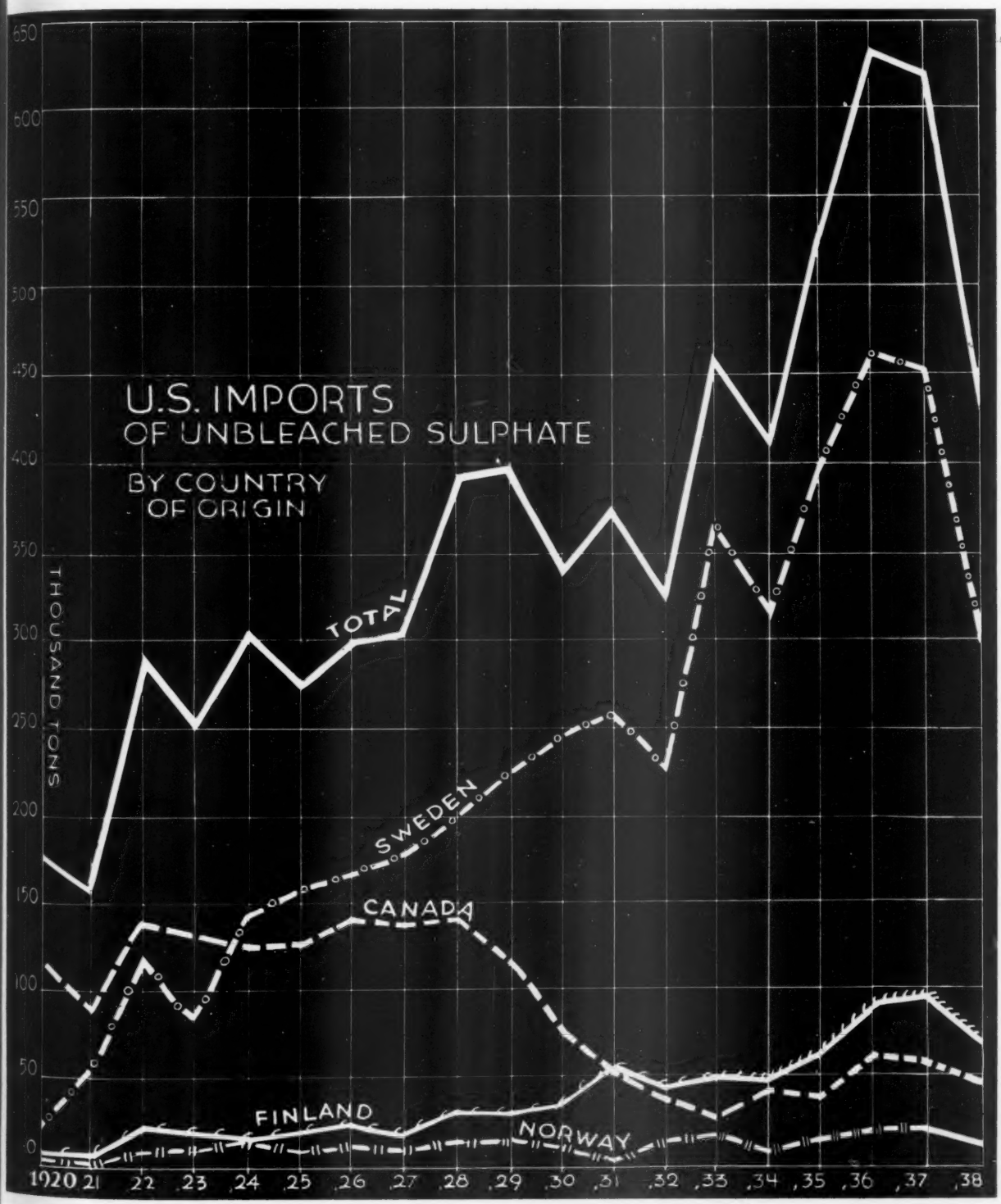
PACIFIC COAST

Imports of Pulpwood

1938

Customs District.	Pulp—Rough—Spruce Cords	Pulp—Rough—Spruce Value	Pulp—Rough—Other Cords	Pulp—Rough—Other Value	Pulpwood—Peeled—Spruce Cords	Pulpwood—Peeled—Spruce Value	Pulpwood—Peeled—Other Cords	Pulpwood—Peeled—Other Value	Pulpwood—Chipped Cords	Pulpwood—Chipped Value	Pulpwood—Rossed Cords	Pulpwood—Rossed Value
Alaska	.....	.....	487	$2,124	...	...	...	...	.....	.....	.....	.....
Washington	1,877	$12,389	1,761	7,078	72	$272	7,250	$28,226	38,142	$54,400	1,476	$6,353
Totals	1,877	$12,389	2,248	$9,202	72	272	7,250	28,226	38,142	54,400	1,476	6,353

Source: U. S. Department of Commerce, Bureau of Foreign & Domestic Commerce.



United States Exports Declined in 1938

Pulp exports declined 53.4% below 1937—Paper and paperboard exports were down 16.6%—Pacific Coast exported 65.8% of the total United States wood pulp exports in 1938

AFTER steadily increasing since 1932 the exports of wood pulp from the United States declined drastically in 1938 from the record level of 1937. The 1938 wood pulp exports of pulp amounted to 140,484 short tons valued at $9,986,826, a drop in tonnage of 161,572 short tons or 53.4 per cent from the 302,056 short tons exported in 1937. In value the decline was $9,905,318 or 49.8 per cent from the $19,892,144 value of the 1937 exports.

Paper and paperboard exports from the United States in 1938 were valued at $25,913,234, as against $31,088,199 in 1937, a decrease of $5,174,965 or 16.6 per cent.

The Pacific Coast exported 92,397 short tons of wood pulp out of the total of 140,484 short tons exported by the entire country in 1938 or 65.7 per cent. In 1937, the Pacific Coast exported 241,462 short tons of wood pulp out of the total United States exports of 302,056 short tons or 80 per cent. The decline in the Pacific Coast exports of wood pulp in 1938 was 149,065 short tons or 61.7 per cent.

In 1936 the Pacific Coast wood pulp industry exported 158,969 short tons out of the total United States wood pulp exports of 193,485 short tons.

Exports of paper and board from the Pacific Coast in 1938 amounted to 28,097 short tons valued at $2,661,984. This compares with exports from the Pacific Coast of 36,746 short tons valued at $3,443,771 in 1937. The 1938 exports dropped 8,649 short tons and $781,787 in value below the 1937 level.

From British Columbia 223,970 short tons of pulp and paper were exported in 1938, the lowest total in more than ten years. The 1938 exports were 148,918 tons or 39.9 per cent below the 1937 exports of 372,888 short tons. The record year for pulp and paper exports from British Columbia was 1936 when 397,388 short tons were exported.

Japan Still Largest Buyer

● Despite the curtailment of wood pulp imports by Japan, that country was the largest single buyer of pulp from United States mills in 1938 with 61,533 short tons out of the total of 140,484 short tons exported, or 43.8 per cent of the total. The value of Japan's purchases in 1938 was $5,662,527. Japan's 1937 purchases of wood pulp from United States mills totaled 215,681 short tons worth $14,427,859. The decline in tonnage was 154,148 tons or 71.5 per cent. The decline in value was 60.7 per cent.

In 1938 the Pacific Coast supplied 42,480 short tons of the total of 61,533 short tons exported to Japan or 69 per cent. The value of the

EXPORTS OF PAPER FROM PACIFIC COAST PORTS 1932-1938

(Tons of 2,000 lbs.)

Customs Districts.	1932 Tons	1932 Value	1933 Tons	1933 Value	1934 Tons	1934 Value	1935 Tons	1935 Value	1936 Tons	1936 Value	1937 Tons	1937 Value	1938 Tons	1938 Value
Washington	1,686	$154,245	4,530	$270,160	5,735	$283,571	3,878	$197,278	4,807	$245,887	10,466	*$1,134,964	5,944	$674,325
Oregon	2,579	130,033	3,895	173,179	11,254	462,088	12,801	436,378	15,904	1,031,489	13,087	*1,117,614	9,349	‡768,272
San Francisco	1,524	87,766	2,644	96,620	4,069	169,014	1,367	64,726	4,985	535,816	4,799	572,773	1,899	†344,230
Los Angeles	27	1,910	129	8,329	553	21,431	285	12,072	176	6,495	2,033	304,468	2,199	269,516
San Diego	2	426	4	453	27	4,165	25	2,934	.....	.....	495[1]	64,763	316	47,205
Totals	5,818	$374,380	11,202	$548,741	21,638	$940,269	18,356	$713,388	25,872	$1,819,697	30,882	$3,194,582	19,707	$2,103,548

*Includes $53,475 for paper shipped through Washington Customs District, $7,824 through Oregon Customs District, for which no tonnage was given.
[1]Includes paper products.
‡Includes $8,401 for paper and paper products shipped through Oregon Customs District for which no tonnage was given.
†Includes $65,587 for paper and paper products shipped through San Francisco Customs District for which no tonnage was given.

EXPORTS OF WOOD PULP FROM PACIFIC COAST PORTS 1932-1938

(Tons of 2,000 lbs.)

Customs Districts.	1932 Tons	1932 Value	1933 Tons	1933 Value	1934 Tons	1934 Value	1935 Tons	1935 Value	1936 Tons	1936 Value	1937 Tons	1937 Value	1938 Tons	1938 Value
Wash.	31,688	$1,574,625	67,346	$2,916,447	110,846	$6,078,757	127,896	$7,368,975	140,072	$7,680,896	201,734	$13,271,137	88,580	$7,062,869
Oregon	1,397	36,135	30	1,140	5,471	203,624	14,103	524,424	18,776	617,867	39,728	1,746,038	2,180	133,471
S. Francisco	1,356	40,557	769	21,990	13	1,803	.....	.....	121	4,241	.....	.....	1,637	48,969
Los Angeles	.....	.....	.....	.....	4,992	356,008	.....	.....	.....	.....	.....	.....	.....	.....
San Diego	.....	.....	.....	.....	14	693	.....	.....	.....	.....	.....	.....	.....	.....
Totals	34,441	$1,651,317	68,145	$2,939,577	121,336	$6,640,885	141,999	$7,893,399	158,969	$8,303,004	241,462	$15,017,175	92,397	$7,245,289

pulp shipped to Japan from West Coast mills was $4,183,424 or 73.9 per cent of the total value of $5,662,527. These figures contrast with the Pacific Coast industry's shipments to Japan in 1937 when 171,903 short tons valued at $10,823,266 were exported to that country.

The loss in tonnage to Pacific Coast mills was 129,423 short tons or a decline of 75 per cent, and the loss in value was $6,639,842 or 61.3 per cent.

The United Kingdom was the second largest buyer of American wood pulp in 1938 as in 1937. The 1938 exports to the U. K. amounted to 30,760 short tons valued at $1,902,530, slightly less in tonnage than the 30,793 short tons exported in 1937, but the value was $183,792 greater than in 1937 when it was $1,718,738. Of this 1938 total of 30,760 short tons the Pacific Coast mills exported 23,195 short tons or 75.4 per cent with a value of $1,391,201 or 73 per cent.

The exports of wood pulp to Japan were cut by reason of that country's stringent foreign exchange regulations. Details of Japan's situation will be found in the article in this number by Carl H. Boehringer, Assistant United States Trade Commissioner in Tokyo.

Exports of wood pulp to the United Kingdom were on the way up during the first half of 1938 but with the development of the Czechoslovakian crisis in September the British pound declined in value in relation to the dollar and prevented American mills from selling in the British market for it forced their price in pounds too high. In the last quarter of the year shipments to the United Kingdom ceased altogether and up to the first of May in 1939 the shipments had not resumed for the pound was still around $4.68, 18 cents below par of $4.86.

Division of U. S. Exports

● The 140,484 short tons of wood pulp exported from the United States last year consisted of 90,262 short tons of bleached sulphite valued at $7,893,756; 33,976 short tons of unbleached sulphite pulp, valued at $1,303,244; 2,729 short tons of soda pulp, valued at $180,708; and 13,517 short tons of other wood pulp, valued at $609,118, which includes bleached and unbleached sulphate pulp as there are not separate listings for these grades.

PAPER AND PULP EXPORTS OF THE UNITED STATES

For the Twelve Months Ending Dec. 31, 1937 and 1938

PAPER EXPORTS

Articles—		12 Months, Ending Dec., 1937 Quantity	12 Months, Ending Dec., 1937 Dollars	12 Months, Ending Dec., 1938 Quantity	12 Months, Ending Dec., 1938 Dollars
Paper and Manufactures			31,088,199		25,913,234
Printing Paper—					
Newsprint paper	lbs.	34,089,087	961,337	11,290,759	347,746
Book paper, not coated	lbs.	29,922,886	1,822,130	18,351,855	1,124,762
Cover paper	lbs.	1,590,430	256,432	1,798,595	255,408
Greaseproof and waterproof paper	lbs.	9,128,220	1,864,392	7,837,714	1,630,598
Overissue and old newspaper	lbs.	193,818,066	2,013,511	142,968,583	945,758
Wrapping paper (except kraft)	lbs.	37,174,086	2,192,351	30,188,506	1,825,096
Kraft wrapping	lbs.	9,196,454	437,823	14,342,977	539,542
Surface coated paper	lbs.	10,587,858	1,146,288	8,071,162	1,022,171
Tissue and crepe paper	lbs.	10,501,402	1,031,773	11,364,583	1,080,484
Toilet paper	lbs.	11,519,241	928,040	10,193,286	830,791
Paper towels and napkins	lbs.	4,050,683	381,493	4,097,625	373,856
Boxboard (paper board and strawboard)	lbs.	69,983,615	1,787,068	83,221,325	1,946,639
Bristols and bristol board	lbs.	3,110,756	183,799	2,605,245	196,399
Other paper board	lbs.	33,403,220	1,561,910	39,327,965	1,496,092
Sheathing and building board	lbs.	14,627,646	527,075	15,035,192	576,278
Fiber insulating board or bat	sq. ft.	61,594,253	1,797,966	45,143,022	1,373,931
Wall board and paper or pulp	sq. ft.	12,567,447	386,480		
Blotting paper	lbs.	2,911,604	300,126	2,067,942	249,891
Filing folders, index cards and other office forms	lbs.	1,246,267	401,824	1,130,396	380,690
Papeteries (fancy writing paper)	lbs.	330,876	71,125	268,917	59,348
Other writing paper	lbs.	36,231,922	3,011,113	27,308,279	2,101,340
Paper hangings (wall paper)	Rolls	1,497,468	153,917	1,426,958	153,906
Paper bags	lbs.	20,326,500	1,221,532	14,860,867	944,585
Boxes and cartons	lbs.	13,856,038	914,326	14,969,575	912,834
Envelopes	lbs.	962,416	172,769	960,559	190,868
Vulcanized fiber sheets, strips, rods and tubes	lbs.	5,121,890	1,363,807	3,859,991	1,044,045
Cash register and adding machine paper	lbs.	4,459,624	325,198	4,610,756	339,840
Other paper and paper products			3,872,594		3,587,996

PAPER BASE STOCK EXPORTS

Article—		12 Months, Ending Dec., 1937 Quantity	12 Months, Ending Dec., 1937 Dollars	12 Months, Ending Dec., 1938 Quantity	12 Months, Ending Dec., 1938 Dollars
Paper base stocks			22,987,498		11,654,690
Pulpwoods	cords	23,798	149,316	52,894	361,259
Wood pulp (Ton, 2,000 lbs. air-dry weight)					
Sulphite wood pulp:					
Bleached	tons	207,589	15,528,810	90,262	7,893,756
Unbleached	tons	84,574	3,806,867	33,976	1,303,244
Sulphate wood pulp, bleached & unbleached		*	*	*	*
Soda wood pulp	tons	7,967	459,054	2,729	180,708
Other wood pulp	tons	1,920	96,752	13,517	609,118
Rags and other paper stock	lbs.	142,813,440	2,946,699	58,243,752	1,306,605

*Included under other wood pulp.

Source: Bureau of Foreign & Domestic Commerce.



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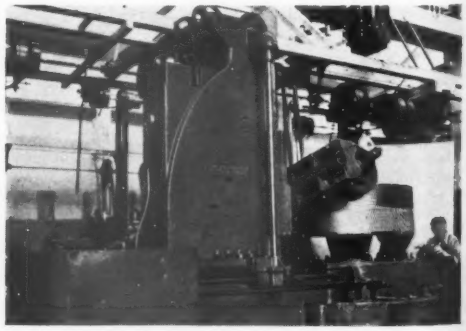
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WESTERN GEARS

WOOD PULP EXPORTS
From Pacific Coast Ports
1938
By Countries of Destination
(Tons of 2,000 Lbs.)

Customs District	Bleached Sulphite Tons	Bleached Sulphite Value	Unbleached Sulphite Tons	Unbleached Sulphite Value	All Other Tons	All Other Value	Total Tons	Total Value
From Washington								
Belgium	2,463	$ 159,522	27	$ 948	11	$ 382	2,501	$ 160,852
Canada	1,294	63,007	-----	-----	1,236	46,766	2,530	109,773
China	12	556	508	16,273	274	12,470	794	29,299
Japan	41,203	4,105,539	-----	-----	242	10,865	41,445	4,116,404
France	4,270	429,795	234	12,512	22	783	4,526	443,090
England	10,861	850,508	9,750	396,161	2,584	144,532	23,195	1,391,201
India (British)	695	35,137	4,054	179,419	324	14,220	5,073	228,776
Brazil	547	22,082	446	15,442	642	27,378	1,635	64,902
Argentina	2,578	243,257	-----	-----	-----	-----	2,578	243,257
Netherlands	11	1,396	-----	-----	-----	-----	11	1,396
Australia	1,296	56,012	-----	-----	1,058	40,440	2,354	96,452
Equador	-----	-----	-----	-----	486	16,443	486	16,443
Philippine Islands	-----	-----	-----	-----	-----	20	-----	20
Italy	1,460	159,967	-----	-----	-----	-----	1,460	159,967
Sweden	-----	-----	-----	-----	32	1,135	32	1,135
Total	66,690	$6,126,778	15,019	$620,755	6,911	$315,434	88,620	$7,062,967
From Oregon								
Japan	-----	-----	1,035	67,020	-----	-----	1,035	67,020
Italy	513	29,254	-----	-----	-----	-----	513	29,254
Belgium	-----	-----	30	1,070	-----	-----	30	1,070
United Kingdom	6	486	204	11,787	-----	-----	210	12,273
Turkey	-----	-----	249	14,784	-----	-----	249	14,784
Brazil	-----	-----	152	9,050	-----	-----	152	9,050
Total	519	$ 29,740	1,670	$103,711	-----	-----	2,189	$ 133,451
Grand Total	**67,209**	**$6,156,518**	**16,689**	**$724,466**	**6,911**	**$315,434**	**90,809**	**$7,196,418**

EXPORTS OF PAPER BOARD
FROM PACIFIC COAST PORTS
1932-1938
(Tons of 2,000 lbs.)
BOXBOARD, BRISTOL, OTHER PAPER BOARD

Customs Districts.	1932 Tons	1932 Value	1933 Tons	1933 Value	1934 Tons	1934 Value	1935 Tons	1935 Value	1936 Tons	1936 Value	1937 Tons	1937 Value	1938 Tons	1938 Value
Washington	228	$10,483	482	$23,335	232	$13,073	192	$14,755	244	$17,550	1,759	$89,347	1,441	$81,328
Oregon	4,357	126,518	2,397	76,612	690	30,638	542	22,829	179	14,200	-----	-----	374	15,106
San Francisco	1,927	89,475	4,406	163,669	2,352	101,089	3,127	123,917	3,853	194,086	4,367	201,550	6,329	424,623
Los Angeles	2½	272	64	5,104	313	15,023	69	6,452	57	7,577	233	23,055	168	28,979
San Diego	½	108	½	98	5	542	2	156	-----	-----	32	3,006	78	8,400
Totals	6,515	$226,856	7,050	$268,818	3,592	$160,365	3,932	$168,109	4,333	$233,413	6,391	$316,958	8,390	$558,436

1,347,296 square feet, value $32,395, passed through Oregon Customs District, 4,516,515 square feet, value $426,363, passed through San Francisco Customs District, not included in total.

BRITISH COLUMBIA
Pulp and Paper Exports
From All British Columbia Ports
(Compiled by Vancouver Merchants' Exchange—Short Tons)

Destination—	1930	1931	1932	1933	1934	1935	1936	1937	1938
Australia	15,940	11,835	15,314	14,685	26,053	26,026	42,876	18,810	34,237
Argentine	609	----------*	19,752	28,604	3,985	-----	-----	-----	-----
Central and South America	16,503	22,637	6,404	12,693	7,314	2,867	-----	2,628	2,041
Canada (Eastern ports)	4,339	4,457	3,820	4,620	24,800	27,677	29,614	29,210	23,566
China	2,620	489	16,105	26,494	40,062	3,281	5,084	1,651	1,401
Japan	54,865	78,631	59,959	100,257	93,212	155,530	131,795	83,764	14,236
New Zealand	9,214	5,363	4,251	4,254	2,845	3,206	5,289	2,331	1,343
United Kingdom	621	9,047	486	347	6,953	4,164	3,698	16,498	6,692
United States	174,017	157,943	130,771	117,733	128,224	123,343	175,861	205,981	134,331
Other Countries	90	458	731	4,984	11,611	4,989	3,171	12,015	6,123
Total Short Tons	278,818	290,860	257,724†	314,671	345,059	351,083	397,388	372,888	223,970

*Argentine shipments in 1931 and 1935 are included under Central and South America.
†Includes 131 tons of paper shipped from New Westminster, destination not available.

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ORANGE, NEW JERSEY

Represented in the Pacific Northwest by

JAMES BRINKLEY COMPANY - SEATTLE

PAPER EXPORTS
From Pacific Coast Ports
By Countries of Destination
1938
(Tons — 2,000 pounds)

Customs District.	News Print		Book Paper Not Coated		Greaseproof and Waterproof		Wrapping Except Kraft		Kraft		Tissue and Crepe	
From Washington	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value	Tons	Value
To Canada	5	$ 166	243	$ 29,283	14	$ 3,149	106	$ 11,153	20	$ 1,821	12	$ 3,236
Philippine Islands	42	4,496	920	99,383	6	1,529	91	8,424	98	7,836	....	.....
Japan	117	6,851	....	.....	....	.....	....	.....	....	.....	....	.....
China	....	.....	529	64,054	....	.....	1	244	....	.....	....	.....
Hong Kong	....	.....	225	26,346	....	.....	....	.....	....	.....	....	.....
Netherlands	....	.....	92	63,775	....	.....	....	.....	....	.....	....	.....
Cuba	....	.....	49	4,794	....	.....	....	.....	....	.....	....	.....
French W. Indies	....	.....	60	6,065	....	.....	....	.....	....	.....	....	.....
Peru	....	.....	10	1,086	....	.....	....	.....	....	.....	....	.....
Argentina	....	.....	28	2,942	....	.....	....	.....	....	.....	....	.....
Venezuela	....	.....	48	4,671	....	.....	....	.....	....	.....	....	.....
Australia	....	.....	148	17,777	....	.....	....	.....	....	.....	....	.....
New Zealand	....	.....	502	51,778	....	.....	....	.....	....	.....	....	.....
All others	....	.....	31	3,484	....	.....	....	.....	....	.....	....	.....
TOTAL	**164**	**$ 11,513**	**2,885**	**$375,338**	**20**	**$ 4,678**	**198**	**$ 19,821**	**118**	**$ 9,657**	**12**	**$ 3,236**
From Oregon												
To Barbadoes	62	2,793	....	.....	....	.....	....	.....	....	.....	....	.....
Jamaica	51	3,461	....	.....	....	.....	51	2,709	....	.....	....	.....
Fr. Indo China	57	949	....	.....	....	.....	....	.....	246	20,515	....	.....
Philippine Islands	640	36,761	....	.....	89	14,790	5,290	367,606	....	.....	....	.....
China	....	.....	....	.....	1	199	....	.....	....	.....	....	.....
Honduras	....	.....	....	.....	....	.....	220	21,958	....	.....	....	.....
Cuba	....	.....	....	.....	....	.....	180	16,723	....	.....	....	.....
Netherlands	....	.....	....	.....	....	.....	88	9,894	....	.....	....	.....
Brazil	....	.....	....	.....	....	.....	59	10,734	....	.....	366	61,079
Chile	....	.....	....	.....	....	.....	56	5,852	....	.....	113	12,814
Colombia	....	.....	....	.....	....	.....	548	49,922	....	.....	....	.....
Ecuador	....	.....	....	.....	....	.....	111	10,278	....	.....	....	.....
Br. Guiana	....	.....	....	.....	....	.....	56	669	....	.....	....	.....
Palestine	....	.....	....	.....	....	.....	602	52,864	....	.....	....	.....
Union of So. Africa	....	.....	....	.....	....	.....	123	12,951	....	.....	....	.....
Belgium	....	.....	....	.....	....	.....	....	.....	17	1,427	....	.....
Argentina	....	.....	....	.....	....	.....	....	.....	....	.....	18	2,950
Syria	....	.....	....	.....	....	.....	....	.....	....	.....	42	3,950
Egypt	....	.....	....	.....	....	.....	....	.....	....	.....	107	12,399
All others	5	150	4	520	....	.....	29	2,540	....	.....	60	7,152
TOTAL	**815**	**$ 44,114**	**4**	**$ 520**	**90**	**$ 14,989**	**7,413**	**$564,700**	**263**	**$ 22,002**	**706**	**$100,325**
From San Francisco												
To Barbados	11	525	....	.....	....	.....	....	.....	....	.....	....	.....
Cuba	64	4,401	230	24,297	....	.....	630	56,194	....	.....	....	.....
Colombia	10	1,053	....	.....	....	.....	16	1,785	....	.....	....	.....
Venezuela	....	.....	29	2,842	....	.....	....	.....	....	.....	....	.....
Brazil	....	.....	....	.....	....	.....	68	9,722	....	.....	220	35,523
Panama	....	.....	....	.....	....	.....	31	3,722	....	.....	....	.....
Hong Kong	....	.....	7	3,459	....	.....	....	.....	....	.....	....	.....
Philippine Islands	....	.....	....	.....	5	2,635	11	3,623	....	.....	1	951
China	....	.....	....	.....	....	.....	5	894	....	.....	....	.....
Egypt	....	.....	....	.....	....	.....	9	1,035	....	.....	....	.....
New Zealand	....	.....	....	.....	....	.....	112	17,246	....	.....	465	67,711
Fr. Oceania	....	.....	....	.....	....	.....	36	4,814	....	.....	....	.....
Ecuador	....	.....	....	.....	....	.....	53	5,213	....	.....	....	.....
Australia	....	.....	....	.....	....	.....	42	5,479	....	.....	38	5,969
Argentina	....	.....	....	.....	....	.....	....	.....	....	.....	44	5,694
All others	2	209	17	1,978	7	2,651	12	1,368	6	583	(1075 lbs.	290
TOTAL	**87**	**$ 5,828**	**283**	**$32,576**	**12**	**$ 5,286**	**1,025**	**$111,095**	**6**	**$ 583**	**768**	**$116,848**
From Los Angeles												
To Cuba	102	$ 6,482			2	390	148	16,602	....	.....	....	.....
New Zealand	12	1,361	....	.....	21	3,274	....	.....	....	.....	....	.....
Australia	....	.....	....	.....	....	.....	....	.....	....	.....	26	3,853
Canada	....	.....	....	.....	....	.....	....	.....	....	.....	....	.....
Panama	....	.....	....	.....	....	.....	18	1,610	....	.....	....	.....
Jamaica	....	.....	....	.....	....	.....	12	2,014	....	.....	6	870
Brazil	....	.....	....	.....	....	.....	26	4,133	....	.....	....	.....
Philippine Islands	....	.....	....	.....	....	.....	....	.....	696	39,697	....	.....
All others	....	.....	....	.....	(876 bbs.)	223	1	202	1	168	(350 lbs.)	124
TOTAL	**114**	**$ 7,843**	....	.....	**35**	**$ 3,664**	**205**	**$ 24,561**	**697**	**$ 39,865**	**32**	**$ 4,723**
GRAND TOTAL	**1,180**	**$ 69,298**	**3,172**	**$408,434**	**157**	**$ 28,617**	**8,841**	**$720,177**	**1,084**	**$ 72,107**	**1,518**	**$225,222**

Pacific Coast Wage Rates Continue Highest in World Industry

Average hourly earnings of Pacific Coast pulp and paper mill employees 30% higher than average for other pulp and paper making regions of the United States—1,089% higher than lowest average hourly foreign wage and 118% higher than highest average hourly foreign wage

ALTHOUGH production of wood pulp on the Pacific Coast in 1938 declined 29.3 per cent from the record 1937 levels; and paper production was down around 10 per cent, the average hourly wage rate, 79.6 cents, remained the same principally because there was no change in the wage rates under the Uniform Labor Agreement. The agreement which was signed on June 1, 1937, was automatically renewed by the parties thereto not giving notice of a desire to re-open and therefore the wage scale has continued on the same basis through these two years and will so continue to the expiration date of the agreement, May 31, 1940.

The data presented here has been made available for publication by the Permanent Classification Committee of the Pacific Coast Association of Pulp and Paper Manufacturers.

The Pacific Coast pulp and paper industry continued to lead all other pulp and paper making sections of the United States and all other producing countries in the hourly wage rate. At this writing no wage data on foreign nations is available for 1938 so the 1937 figures are employed as it is known that there were no material increases to change the relative relationships.

It will be noted from Table I that average hourly earnings on the Pacific Coast have increased from 58.3 cents in 1934 to 79.6 cents in 1938, an increase in excess of 36 per cent.

Over the same period in all other United States pulp and paper making regions, average hourly earnings have increased from 51.2 cents to 61.1 cents, an increase of slightly over 19 per cent.

During 1938 the average hourly earnings on the Pacific Coast exceeded all other regions in the United States by better than 30 per cent.

Further inspection reveals that the average hourly earnings in 1938 for "All Other United States Regions", decreased almost one cent over 1937.

Average Weekly Earnings Declined

● Average weekly earnings were down in 1938 in all regions as compared with 1937 except in the Southern (East) where an increase of 41 cents per week was maintained. (This may be to payment of time and one-half for overtime above 44 hours and for possible increases in common labor which may have been below 25 cents per hour, the Wage-Hour Law minimum).

Average hourly and weekly earnings in the Pacific Coast industry for the first three months of 1939 were about the same as in 1938.

Foreign Wage Data

● Earnings of workers in the pulp and paper industry in foreign countries vary widely, and in all cases are much lower than those in the United States. They ranged in 1937 from the extreme low of the equivalent of 45 cents per day in Japan to a high of $2.41 per day in Norway, a range which, according to our standards, would amount to nine cents up to 30 cents per hour.

While the available figures do not present the picture in the various countries from the same angle in all cases, they express in a general way the relative wage levels and provide

TABLE I

Average Hourly Earnings in Cents of Productive Employees (Exclusive of Converting Employees) in Pulp and Paper Manufacturing.

(Source: Calculated from tables received from A.P.P.A.)

	June to December Inclusive				
	1934	1935	1936	1937	1938
Pacific Coast	58.3	62.0	66.9	79.6	79.6
All Other U. S. Regions	51.2	52.6	53.0	62.0	61.1
North East (New England)	52.2	53.7	53.7	62.3	60.7
Middle Atlantic	52.8	55.1	55.6	64.9	63.6
Lake States	52.4	53.7	54.5	64.6	64.6
Central (North)	51.6	53.4	54.3	61.7	62.6
Central (South)	46.5	47.4	47.7	55.8	54.9
Southern (East)	46.0	47.0	47.7	56.9	57.0

TABLE II

Average Weekly Earnings of Productive Employees (Exclusive of Converting Employees) in Pulp and Paper Manufacturing.

(Source: Calculated from tables received from A.P.P.A.)

	June to December Inclusive				
	1934	1925	1936	1937	1938
Pacific Coast	$20.33	$22.80	$25.73	$29.61	$26.49
All Other U. S. Regions	17.56	19.84	21.70	23.84	23.16
North East (New England)	17.93	19.85	21.60	23.87	22.37
Middle Atlantic	18.53	20.83	23.15	24.68	23.99
Lake States	18.08	20.42	22.98	25.71	25.13
Central (North)	17.34	20.04	22.06	23.66	23.42
Central (South)	16.11	18.35	19.41	21.09	20.77
Southern (East)	14.57	17.60	18.43	20.98	21.39

a basis on which to study comparative wages.

These data, compiled from official sources, show that the average hourly earning of male workers in the Finland industry was 14.8 cents per hour, while females earned 7.6 cents per hour in 1936. The average rate in Denmark ranged 26.8 cents per hour in the provinces to 28.6 in Copenhagen.

German workers in paper production received, if skilled, an average of 30.5 cents per hour in 1936, while unskilled employes were paid an average of 23.1 cents. In Norway, chemical pulp workers earned an average daily wage of 2.53; those making mechanical pulp received an average of $2.21 per day; paper and cardboard workers were paid an average of $2.34. This amounted to a general average of $2.41 per day for the entire industry, in 1936. Swedish pulp mills paid their men an average 29.5 cents per hour in the same year, while paper and cardboard mills paid 28.2 cents to men and 18.2 cents to women.

In the paper and board making industry of Great Britain, the average wage earner received $12.88 per week for an average week of 48.2 hours, or slightly less than 27 cents per hour. These figures were for October, 1935, the latest available. Paper makers in Italy earned 10 cents as the average hourly wage as late as October, 1937. In Japan, male workers in the manufacture of foreign style paper had average daily earnings of 51 cents, based on current rates of exchange, and female workers earned 16 cents per day in 1936. Makers of Japanese paper received 45 cents per day, and those making printing paper were paid an average of 59 cents per day. These average earnings include overtime and night work, bonuses for quality and food allowances.

STATE OF WASHINGTON PAYROLLS AND HOURS WORKED 1927-1938*

Year.	ALL HAZARDOUS INDUSTRY OF STATE — Payroll	Workmen Hours	Increase or Decrease Compared With Preceding Year Payroll	Increase or Decrease Compared With Preceding Year Hours Work	LUMBERING — Payroll	Workmen Hours	Increase or Decrease Compared With Preceding Year Payroll	Increase or Decrease Compared With Preceding Year Hours Work	PULP AND PAPER MANUFACTURING — Payroll	Workmen Hours	Increase or Decrease Compared With Preceding Year Payroll	Increase or Decrease Compared With Preceding Year Hours Work
1927	$255,669,929	396,071,584	.....	.....	$83,446,482	130,841,328	.....	.....	$4,855,526	7,710,848	.....	.....
1928	271,223,403	414,002,480	6.08%	4.53%	83,782,300	127,973,488	.40%	-2.19%	5,573,223	8,507,600	14.78%	10.33%
1929	288,903,912	437,600,400	6.52%	5.70%	86,986,842	131,720,152	3.82%	2.93%	7,845,335	12,275,072	40.77%	44.28%
1930	260,002,808	397,369,096	-10.00%	-9.19%	63,093,612	98,102,528	-28.45%	-25.52%	9,110,285	13,874,832	16.12%	13.03%
1931	188,705,890	317,120,680	-27.42%	-20.19%	33,236,663	64,161,624	-47.32%	-34.60%	6,990,889	11,360,944	-23.26%	-18.12%
1932	131,893,000	255,078,920	-30.11%	-19.56%	16,853,140	41,214,176	-49.29%	-35.77%	5,063,638	8,960,224	-27.57%	-21.13%
1933	129,023,888	260,928,662	-2.18%	2.29%	23,101,145	51,066,187	37.07%	23.90%	5,166,375	9,693,579	2.03%	8.18%
1934	161,702,804	284,179,483	25.33%	8.91%	29,693,289	51,106,876	28.54%	.08%	7,435,151	11,835,457	43.91%	22.10%
1935	187,578,233	312,935,429	16.00%	10.12%	35,389,039	57,808,831	19.18%	13.11%	8,131,888	12,560,285	9.37%	6.12%
1936	241,960,112	379,926,777	28.99%	21.41%	51,799,595	77,214,714	46.32%	33.57%	9,858,151	14,638,927	21.23%	16.55%
1937	286,480,085	412,743,811	18.40%	8.64%	58,947,801	77,777,272	13.80%	.75%	12,607,622	16,305,933	27.89%	11.37%
1938	267,784,196	379,432,496	-6.53%	-8.07%	43,719,909	55,718,862	-25.93%	-28.36%	10,227,766	12,254,194	-18.88%	-24.85%

Industry as a whole: Payroll in 1938 was 4.74% more than in 1927 while hours work show a decrease of 4.20%, and both payroll and hours work in 1938 show decreases of 7.31% and 13.29% in comparison with 1929, the peak year.

Lumbering Industry: Payroll and hours work respectively in 1938 were 47.61% and 57.41% less than in 1927, and 49.74% and 57.70% less than in 1929, the peak year.

Pulp and Paper Mfg.: Payroll and hours work respectively in 1938 were 110.64% and 58.92% greater than in 1927. The payroll in 1938 was 30.37% more and the hours work were 0.17% less than in 1929, payroll and hours work respectively were 12.27% more and 11.68% less than in 1930, the peak year in this industry.

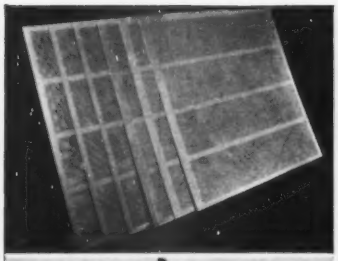
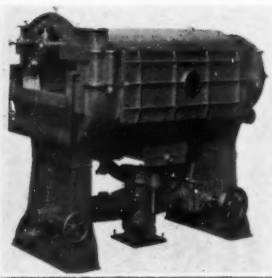
* Prepared by the Statistical Division, Department of Labor and Industries, State of Washington, Olympia, Washington.

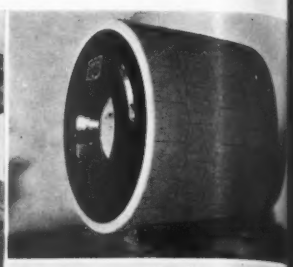
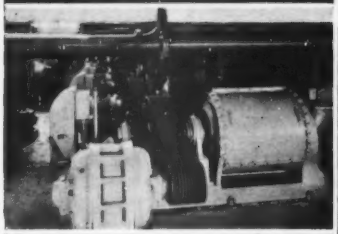
Washington's 1938 Payrolls

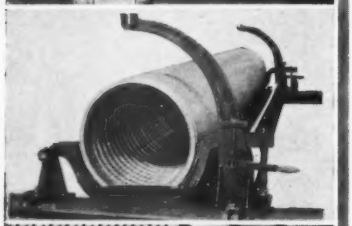
• In 1938 the payroll of the pulp and paper industry in the State of Washington amounted to $10,227,776, a decline of $2,379,856 or 18.88 per cent. However, the 1938 payroll was $369,615 higher than the poyroll for 1936 which totaled $9,858,151.

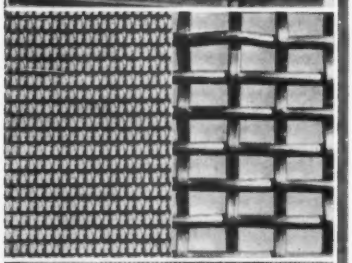
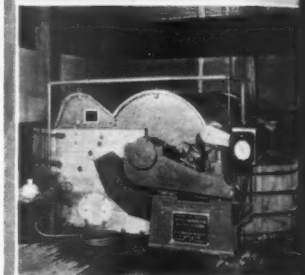
Hours worked in 1938 by employes of pulp and paper mills in Washington totaled 12,254,194, a decrease of 4,051,739 hours or 24.85 per cent, according to the data from the Statistical Division of the Washington State Department of Labor and Industries.

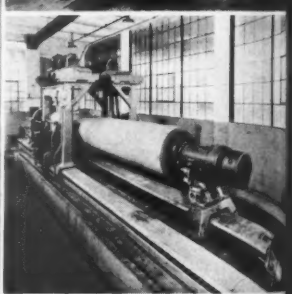
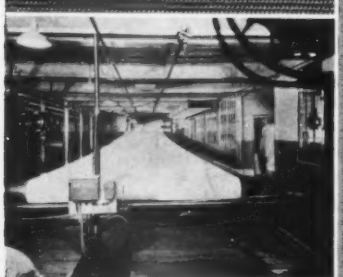
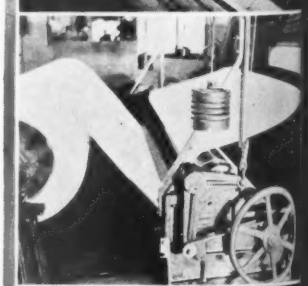
The hours worked in 1938 were 306,091 hours less than the 12,560,-

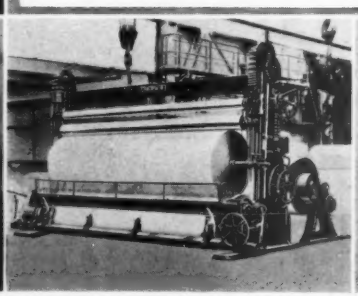









MACHINE CLOTHING — EQUIPMENT — FOR PULP AND PAPER MILLS — SUPPLIES — RAW MATERIALS

1919 1939

1939 marks the 20th year of our service to the pulp and paper industry. During these 20 years we have seen this industry on the Pacific Coast grow in stature and importance. It is our hope that we have contributed to what has been accomplished by providing a specialized service and helping to create a better understanding of Western problems by the manufacturers of equipment and supplies.

Our efforts have been productive only through the cooperation of our customers and therefore our principals join with us in extending thanks to our many friends and patrons for their support.

PACIFIC COAST SUPPLY CO.

SAN FRANCISCO — PORTLAND — SEATTLE

Representing the Foremost Manufacturers

Bemis Associates, Inc.
Calco Chemical Co., Inc.
California Cotton Mills Co.
Cameron Machine Co.
Eastwood-Nealley Corp.
Farrel-Birmingham Co., Inc.
Heller & Merz
F. C. Huyck & Sons
E. D. Jones & Sons Co.
Charles Mundt & Sons
Norton Company
B. F. Perkins & Sons, Inc.
J. J. Plank & Co.
F. W. Roberts Mfg. Co.
Texas Gulf Sulphur Co.
Union Screen Plate Co.

285 hours worked in 1935, but the payroll in 1938 was $2,195,878 greater than the 1935 total of $8,-131,888.

The payroll in 1938 was 110.64 per cent greater than in 1927 and the hours worked 58.92 per cent greater. In 1938 the payroll was 30.37 per cent greater and the hours worked .17 per cent less than in 1929. In 1938 the payroll was 12.27 per cent more and the hours worked 11.68 per cent less than in 1930.

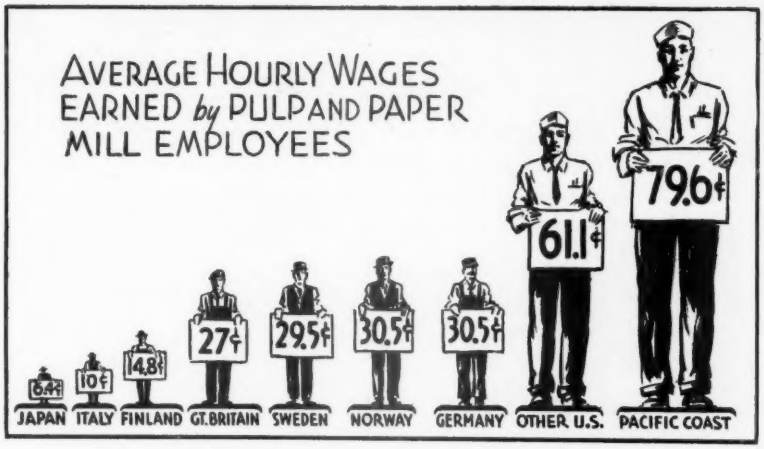
In hours worked 1929 with 12,-275,072 is the closest to the 12,254,-194 hours worked in 1938 when the hours were 20,878 less. But the 1938 payroll was $2,382,431 larger than in 1929.

Oregon's 1938 Payrolls

● The pulp and paper industry of the State of Oregon reported a payroll for 1938 of $3,207,313.93 which was $1,091,603.29 or 25.3 per cent less than the 1937 payroll of $4,298,917.22.

The 1938 payroll was $37,310.08 less than the payroll for 1936 but $222,424.71 more than the $2,984,-889.22 payroll of 1935. It was the largest payroll in the history of the Oregon pulp and paper industry with the exception of 1936 and 1937.

The Oregon industry worked a total of 596,405 days in 1938 as compared with 857,696 days in 1937, a decrease in time worked of 261,-291 days or 30 per cent. The days worked in 1938 were less than any year since 1933 when the days worked totaled 535,789, but the payroll in 1933 was but $1,819.904.95, $1,387,408.98 less than the $3,207,-313.93 paid in 1938.



California

● As the payroll and hours worked data available from the State of California is incomplete and not comparable with the data from Washington and Oregon, it is omitted here. The data on California's industry from the 1937 Census of Maufactures will be published along with that for Washington and Oregon as soon as it is released by the Bureau of Census in Washington. The data from the Census of Manufactures for 1935 was published in the 1938 Review Number.

Hybrid Poplars Planted In Northwest

● Two experimental plantations of 25 different lots of hybrid poplars and cottonwoods have just been established by the Pacific Northwest Forest Experiment Station of the Forest Service in the search for superior, rapid-growing strains of trees. These hybrids have been developed by the Oxford Paper Company in collaboration with the New York Botanical Garden and the Northeastern Forest Experiment Station, and are being tested in various parts of the country.

One of the local plantations was made by CCC boys on Lady Island in the Columbia River on lands loaned for these tests by the Crown-Zellerbach Corporation. The other plantation is on hillside land near the coast on the Cascade Head Experimental Forest. The trees will be examined annually and if any of them show superior qualities of rapid growth and hardiness, further selections will be made from which extensive plantations can be established for the growing of poplar pulp timber.

STATE OF OREGON

Payrolls and Employment 1927-1938*

PULP AND PAPER MANUFACTURING

Year	Payroll	Work Days	Approximate Number Employees
Fiscal Year 1927-1928	$2,691,220.18	581,833	1,939
Fiscal Year 1928-1929	2,946,218.92	640,724	2,136
Six Mos. July to Dec., 1931, Inc.	1,017,435.13	235,114	1,566
Calendar Year 1932	1,896,692.09	504,311	1,681
Calendar Year 1933	1,819,904.95	535,789	1,786
Calendar Year 1934	2,577,436.84	700,842	2,336
Calendar Year 1935	2,984,889.22	778,547	2,837
Calendar Year 1936	3,578,624.01	839,063	2,697
Calendar Year 1937	4,298,917.22	857,696	2,861
Calendar Year 1938	3,207,313.93	596,405	2,052

*Statistics furnished by the Oregon State Industrial Accident Commission.
Data from July 1, 1929, to June 30, 1931, not available.

Subsidized Import Competition Threatens To Cripple the U. S. Wood Pulp Industry

The United States Pulp Producers Association, in a bulletin issued this month, outlines the problems of foreign origin facing the domestic industry and emphasizes the economic importance to this country of a healthy wood pulp industry

THE manufacture of Wood Pulp is a basic American Industry.

It is largely a forest products industry, utilizing one of America's greatest natural resources.

It encourages forest conservation and sustained yield management of both public and private forests throughout the United States.

It encounters no difficulty in securing adequate supplies of all of its necessary raw materials, including pulpwood.

It gives direct and indirect employment to approximately **three hundred thousand** men in the manufacture and transportation of its raw materials and finished products.

Its products are essential raw materials for many domestic industries which are inseparably woven into the fabric of our national economy and national defense.

The Wood Pulp Industry of the United States has a present capacity to produce 9,460,000 tons of pulp annually. American consumption of wood pulp has never yet reached 8,700,000 tons a year.

The industry is capable of continued expansion to meet the growing needs of this country. The timber supply of the United States is ample to sustain a greatly expanded pulp industry without danger of overcutting or detriment to other domestic wood-using industries.

Expansion of the domestic pulp industry is limited only by the importations of foreign pulp into this market and by the trade barriers set up by foreign governments to protect their own national economy and to foster the development of their own pulp industries.

Unlike most American industries, the Wood Pulp Industry of the United States has no tariff protection, pulp being on the Free List.

In its own markets, it must engage in open competition with pulp manufactured in foreign countries. When it attempts to export its products it must compete with highly nationalized pulp industries in Europe and with Barter Exchange in European and other world markets.

FOREWORD

This bulletin gives basic reasons why the Wood Pulp Industry of the United States is asking for some measure of relief from abnormal and artificial import competition.

Nearly three-fourths of all the pulp sold in the United States market is of foreign origin. The price of pulp in the United States is therefore governed largely by the foreign producer.

The effect upon market values of offerings of even relatively small quantities of abnormally low-priced pulps, particularly in periods of depressed markets is to well known to require further comment.

Basic Elements of Intensified Foreign Competition

● The United States Pulp Industry is encountering intensified foreign competition as a result of:

1. Depreciated foreign currencies.
2. Dumping of European pulps in the United States market.
3. Lower foreign ocean freight rates.
4. Lower European labor costs.

The kind of competition which American pulp producers are obliged to face as a consequence of lower foreign ocean freight rates and lower European labor costs is discussed briefly in Appendices A and B.

In spite of the comparative advantages possessed by European pulp manufacturers because of their lower ocean freight and labor rates, American pulp producers have been able to maintain their existence, even if frequently upon an unprofitable basis. Now, however, their very existence is threatened by the added competitive burdens resulting from depreciated foreign currencies and the "subsidized" dumping of European pulp in the United States market.

These Added Burdens Threaten to Cripple the Domestic Industry

● They are not the result of ordinary, free-trade competition, but are the result of competition which is artificial and abnormal. This competition has driven the price of pulp down below pre-war levels, despite the fact that present-day American labor and material costs are far higher than in 1914. The impossibility of meeting such competition has caused curtailed production in domestic pulp mills generally, has closed down some mills entirely, and threatens to close down others. As a result, wage earners employed by the industry (including those who supply it with pulpwood, fuel, chemicals, transportation, etc.) mill owners and local, state and federal governments, have all suffered heavy financial losses.

Depreciated European Currencies

● Depreciated currencies enable European producers to undersell domestic products in this market without cutting their prices in terms of their own currencies. For example: If a foreign producer is satisfied to sell a ton of pulp for 205 kroner, then in order to get this same return, at the varying rates of exchange indicated below, he would only have to ask the indicated prices in United States money:

It will be noted that the price advantage which the foreign producer of pulp gained by the recent exchange drop from January 1938, to January 1939, approximates $3.70 per short ton of bleached pulp. The advantage gained because of the exchange drop between September 1931 and December 1932 was approximately $18.00.

Thus it is evident that the American Producer is vitally affected by the rate of exchange. When exchange rates drop, the foreign producer is in a position to under cut the Amreican market without damage to himself. This tends to drive down the price of all American commodities, beginning with those on the Free List, but ultimately extending to tariff-protected articles.

It is also obvious that on a falling rate of exchange for foreign currencies the lower price, in dollars, which American producers obtain on sales made in foreign currencies, tends to exclude American

Foreign Producer to Get	Exchange Rate		Would Sell At
205 kronor	Sept. 1931	@ 26.8c	$55.00
205 kronor	Dec. 1932	@ 17.9c	36.70
205 kronor	Jan. 1938	@ 25.8c	52.90
205 kronor	Jan. 1939	@ 24.0c	49.20

*Par value

pulps and other products from foreign markets.

What occurs during a severe decline in the exchange value of foreign currencies is illustrated by the experience of the pulp industry when England first abandoned a fixed gold basis for the pound.

During the year 1931, out of every 100 tons of wood pulp consumed in the United States, 27 TONS WERE IMPORTED. When the exchange rates of European currencies dropped more than 30 per cent in 1932 and 1933, the proportion of imported pulps to total consumption increased to nearly 32 TONS out of each 100 tons consumed, while DOMESTIC PRODUCTION DECLINED substantially. During this period the price of pulp in the United States dropped nearly 30 per cent below prices prevailing prior to England's abandonment of the Gold Standard.

In March 1933, the United States left the Gold Standard. The result was that the exchange rates of European currencies soon returned to approximately their old par values; the proportion of imported pulps to total consumption grew less; domestic production increased and pulp prices advanced.

The Dumping of European Pulps in the United States Market

● In addition to the damage that is being done to the United States pulp industry by the drop in exchange rates, there is also a serious damage due to the "dumping" of European pulps in this market.

"Dumping" means selling at prices which give the foreign manufacturer a net return less than that received at his own home market. It may also mean selling below the cost of production. In addition to other competitive advantages of low wage rates, low ocean freight rates and depreciated currencies, a foreign manufacturer may also receive the advatange of a subsidy, i.e. a bonus from his Government which enables him to "dump" his products in our domestic market.

This form of subsidized dumping is usually done by countries controlled by dictatorship governments. However, other governments may also subsidize their exports. This may be in the nature of a subsidy on ocean freight rates, so as to permit shippers in the country giving the subsidy to undercut competitors' prices in another country. Other forms of subsidy are advantageous wood costs, favorable interest rates, barter benefits, etc., etc.

"DUMPING" BY FOREIGN PRODUCERS IN UNITED STATES MARKETS IS A SERIOUS THREAT TO OUR DOMESTIC INDUSTRY. Such unfair competition breaks down prices unreasonably and without reference to cost of production. It creates unemployment and cripples American industries.

Government Relief Essential

● Artificial and abnormal foreign competition based on depreciated currencies and subsidized dumping is not "free trade". Relief from such competition can only come through governmental action. The United States must prevent its industries from being crippled by such competition.

On the ground of national security alone, assistance should be given to the Wood Pulp Industry of the United States to insure this country's being able to meet its national requirements if foreign wood pulp supplies should be cut off by war. On behalf of all United States industry, protected and unprotected alike, we are asking for legislation to restore the competitive conditions existing before the recent devaluation of European currencies and to prevent the dumping of European pulps and other competitive commodities in this market.

If our industries are to maintain American standards of living, to employ American labor as fully as possible and to utilize American capital and raw materials advantageously, they must be shielded from artificial, abnormal and destructive import competition. We believe that support of this program should

Note: For further details regarding the effect of depreciated foreign currencies on the domestic pulp industry see pamphlet entitled "The Effect of Depreciated Foreign Currencies on Commodity Prices in the United States" as issued by the United States Pulp Producers Association in April, 1939. (This pamphlet is also published in full in this Annual Review Number.)

DOMESTIC PULPWOOD SUPPLY ADEQUATE FOR GREATLY EXPANDED INDUSTRY

The pulp industry in the United States need expect no difficulty in securing all the raw material it needs from our own forests, according to F. A. Silcox, chief of the U. S. Forest Service. Mr. Silcox's statement, quoted by permission, is as follows:

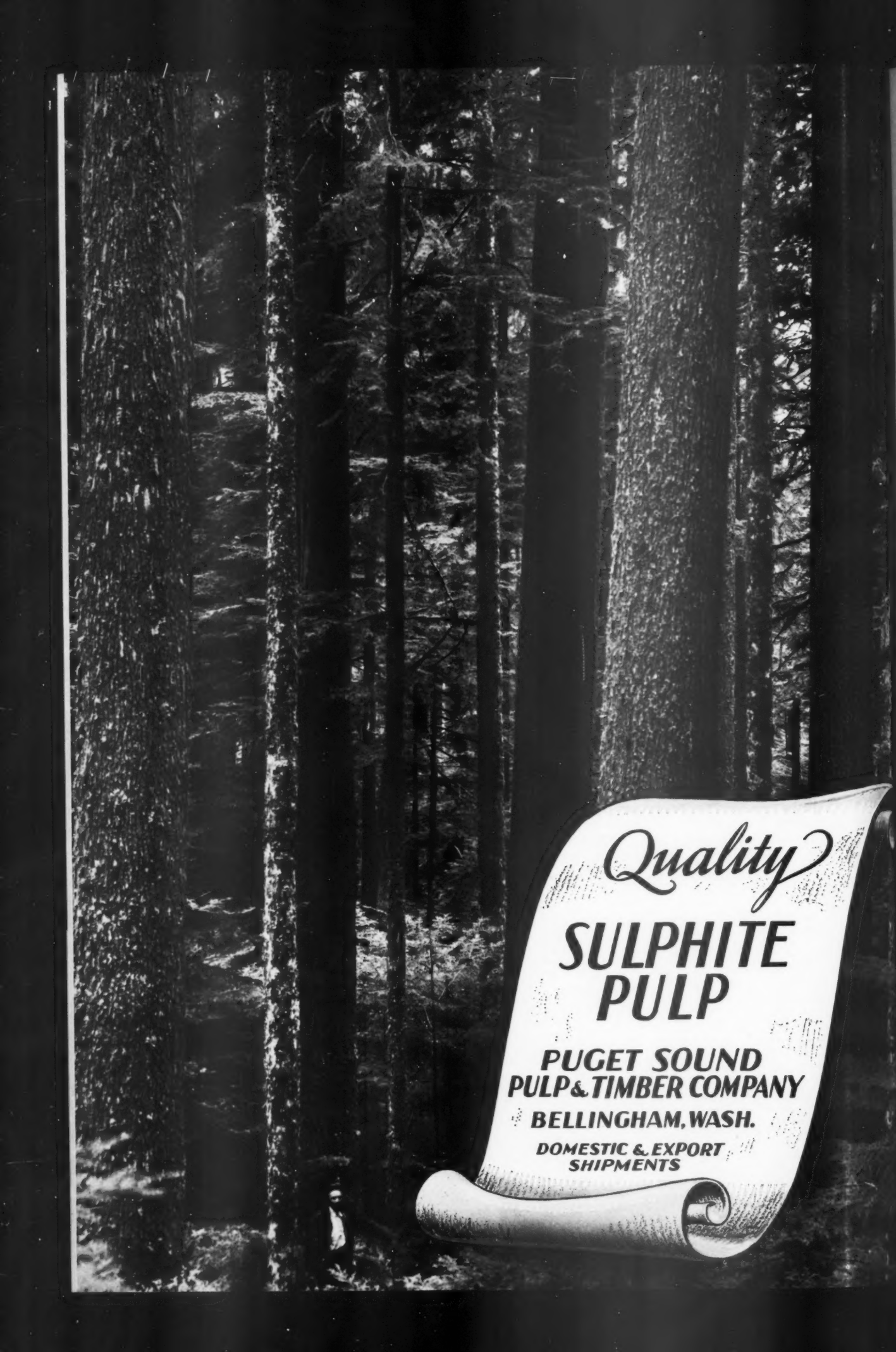
"With adequate woods practices and fire prevention extended to all commercial forest lands, no matter who own them, the pulp and paper industry of the United States should be able to count on at least twice as much pulpwood as is now being taken from our forests.

"In many sections of the country pulpwood operations provide a much-needed market for improvement thinnings and make possible increased forest growth, on which successful and continuous forest operations depend.

"The pulp industry can use species and materials which are of relatively little value for lumber and which, under present methods of timber operations, are often completely wasted.

"I believe that the pulp industry is in a position to contribute much toward sustained yield management of our forests and that with adequate woods practices and fire prevention extended to all commercial forest lands, there is no question but that our forest resources are adequate to meet the needs of a greatly expanded domestic pulp industry."

F. A. Silcox, May 2, 1939.


Quality
SULPHITE
PULP
PUGET SOUND
PULP & TIMBER COMPANY
BELLINGHAM, WASH.
DOMESTIC & EXPORT
SHIPMENTS

be accorded by the Government of the United States without delay.

Appendix A

Low Labor Costs in European Pulp Mills

● Wages paid by American pulp producers are from two to four times higher than those paid in European pulp producing countries. This is the result of American standards of living and of the United States pulp industry's support of the Government's social, economic and political reforms.

Wage Rates of Pulp and Paper Mills'

Employees*

Finland	14.8c per hour
Great Britain	27.0c per hour
Sweden	29.5c per hour
Norway	30.5c per hour
Germany	30.5c per hour
UNITED STATES	62.4c per hour

*Source: "Pacific Pulp and Paper Industry," January, 1939.

Appendix B

European Ocean Freight Advantages

● The freight rate on wood pulp from Baltic (or Scandinavian) ports to the Atlantic Coast of the United States is now $3.57 per short ton (2,000 lbs.). Compare this with the minimum rates on wood pulp shipped from our Atlantic Coast ports to various points in Europe. From Atlantic Coast ports to the United Kingdom the minimum rate is $6.00 per short ton (50 cubic feet); to French Atlantic ports the minimum rate is $7.00 per short ton; to Baltic and Scandinavian ports the minimum rate is $9.50 per short ton; and, to Continental European ports the minimum rate is $7.00 per short ton.

The freight rate on wood pulp from Baltic (or Scandinavian) ports to our Pacific Coast ports through the Panama Canal is $4.50 per short ton. Compare this rate with the rate of $7.14 per short ton on pulp shipped from our Pacific Coast ports to England!

Compare the rate of $4.50 per ton on wood pulp shipped from Baltic ports to our Pacific Coast with the rate of $7.00 per ton on pulp shipped from our Pacific Coast to our Atlantic seaports.

In 1934 the rate on pulp from our Pacific Coast ports to our Atlantic seaports was $5.00 per ton. Since that time there have been five increases, which have made the rate now $7.00 per ton. The law requires American producers to use only American vessels for intercoastal and coastwise shipments. The difference between the wages paid on American and foreign ships only intensifies the burdens of the domestic industry.

No industry, whose products are bound on the Free List, can successfully meet this abnormal and artificial competition. IT MUST SEEK SUCH RELIEF AS ONLY THE GOVERNMENT CAN PROVIDE.

Joint Meeting of Superintendents and TAPPI

Tacoma, June 2nd and 3rd

▶ Everyone interested in the pulp and paper industry is invited to attend the Joint Spring Meeting of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and the Pacific Section of TAPPI, which will be held FRIDAY and SATURDAY, JUNE 2nd and 3rd, at the HOTEL WINTHROP in TACOMA, WASHINGTON.

General Chairman Niles M. Anderson of the St. Regis Kraft Company has arranged the following program which is full of interest and instruction:

▶ FRIDAY, JUNE 2nd—Registration opens at noon in the lobby of the Hotel Winthrop. In the afternoon there will be a golf tournament at the Tacoma Country and Golf Club with lots of prizes for the winners. For those who don't play, a trip has been arranged to visit the large ceramic products plant of Gladding, McBean & Company at Renton.

Early arrivals in Tacoma are invited to visit the interesting chlorine and caustic soda plants of the Hooker Electrochemical Company and the Pennsylvania Salt Manufacturing Company, and the bleached kraft pulp mill of the St. Regis Kraft Company.

Friday evening an informal cabaret party will be held at the hotel.

▶ SATURDAY, JUNE 3rd—A Stag Breakfast at 8:30 a.m. will put everyone in good humor for the serious business of the day which begins at 9:30 when the following five papers will be presented:

"Objectives in the Various Stages of Pulp Purification," by Tom Moffitt of the Hooker Electrochemical Company.

"The Factors Affecting the Life of Paper Machine Felts," by V. L. Tipka, Hawley Pulp & Paper Company.

"Cooking Problems and Cell Walls of Wood," by Professor Bror L. Grondal, College of Forestry, University of Washington.

"Forest Products Research in Pulping Western Woods," by Dr. C. E. Curran, In Charge Pulp and Paper Section, U. S. Forest Products Laboratory, Madison, Wisconsin.

"Boost Wood Pulp — A Versatile Raw Material," by W. C. McIndoe, Industrial Chemist.

Following the delivery of the papers the Pacific Section of TAPPI will hold a business meeting and its annual election of officers.

▶ In the afternoon there will be the usual star feature of all Superintendents' meetings, the Round Table Discussion of pulp and paper mill operating problems.

Saturday evening a reception will be held in honor of the guests from the Middle West and East, Mr. W. H. Swanson, Vice-President of TAPPI and Technical Director, Kimberly-Clark Corp., Kimberly, Wisconsin; R. G. Macdonald, Secretary of TAPPI, from New York; and Dr. C. E. Curran of the U. S. Forest Products Laboratory at Madison, Wisconsin. At the banquet following the reception the winners of the golf tournament will receive their prizes. The rest of the evening will be devoted to dancing.

▶ Reservations should be made with Niles M. Anderson, General Chairman, St. Regis Kraft Company, Tacoma, Washington.

Rayon Production Continues Upward; World Consumption Keeps Pace

U. S. Consumption Exceeds Production by 12% or approximately 39,000,000 pounds – U. S. Filament Rayon Production declines 54,176,000 pounds or 15.8% below 1937 record, but Staple Fiber production increases from 20,244,000 pounds in 1937 to 29,833,000 pounds in 1938, or nearly 50%

WORLD production of rayon and staple fiber continued to expand in 1938 reaching a total estimated by the Rayon Organon of 1,900,000,000 pounds as compared with 1937 production of 1,823,000,000 pounds.

It will be noted from the table that filament rayon production declined throughout the world last year while staple fiber production increased about 50 per cent, accounting for nearly half of the world's rayon production.

The United States produced 26 per cent of the filament rayon and 3 per cent of the staple fiber. Japan continued to lead all other countries with a production of around 550,000,000 pounds, which represents, states the Rayon Organon, about 20 per cent of the world's filament yarn production and about 35 per cent of the staple fiber production.

With a total increase in both rayon and staple fiber production of 38 per cent in 1938 over 1937, Germany took second place in world rayon production. German filament rayon and staple fiber production amounted to 485,000,000 pounds in 1938 as compared with 351,000,000 pounds in 1937, according to the U. S. Bureau of Foreign & Domestic Commerce. The expansion was chiefly in the production of staple fiber which rose 52 per cent in 1938 over 1937, from 225,000,000 pounds in 1937 to 342,000,000 pounds in 1938.

Filament rayon yarn production in Germany increased 14.4 per cent in 1938 over 1937, from 125,000,000 pounds in 1937 to 143,000,000 pounds in 1938.

● The United Kingdom's total rayon production declined 7.9 per cent from 152,400,000 pounds to 140,323,000 pounds, a drop of 12,100,000 pounds. Filament rayon production was responsible for the entire reduction of Great Britain's industry with a decline from 119,700,000 pounds in 1937 to 106,448,000 pounds in 1938, while staple fiber increased slightly from 32,700,000 pounds to 33,900,000 pounds.

At the time of going to press data was not available covering the rayon and staple fiber production of Italy and France, but it is understood filament rayon production also declined in those countries while staple fiber increased.

U. S. Consumption Rises

● The consumption of rayon (filament and staple) in the United States during 1938 set a new record of 327,000,000 pounds. The previous record consumption was in 1936, according to the Rayon Organon's Annual Rayon Statistical Survey, when 323,000,000 pounds were consumed. Consumption in 1937 was but 308,000,000 pounds.

It will be noted from the table prepared by the Rayon Organon that the consumption of staple fiber is expanding rapidly in this country with 53,000,000 pounds in 1938 against 41,000,000 pounds in 1937 and 25,000,000 pounds in 1936.

Total Production Declined

● While consumption of rayon increased in 1938 over 1937 in the United States, production lagged, dropping to 287,749,000 pounds from 341,925,000 pounds (filament and staple combined) a decline of 54,176,000 pounds or 15.8 per cent.

The decline was entirely in the filament rayon which dropped from 321,681,000 pounds to 257,916,000 pounds, a decrease of 63,765,000 pounds or 19.8 per cent.

Staple Fiber Production Expands

● Staple fiber continued its rapid growth during 1938 attaining a domestic production of 29,833,000 pounds against 20,244,000 pounds in 1937, almost a 50 per cent increase. The United States still lags far behind the rest of the world in the production of staple fiber producing but 3 per cent of the world total while production of filament rayon amounts to 26 per cent of the world total. Staple fiber has experienced its most rapid growth in those countries that do not possess natural fibers of their own, Japan, Germany, and Italy. It can be produced more cheaply than filament rayon and makes an excellent substitute for cotton and wool, imitating either. In addition, it possesses characteristics of its own which permits the development of fabrics having entirely different appearances from cottons and wool.

It is staple fiber's style versatility which has brought it to the front in this country more than its cheapness or its ability to substitute for cotton and wool.

U. S. Rayon Imports

● In 1938 the United States imported approximately 23,500,000 pounds of staple fiber, according to the Rayon Organon's estimate. The 1937 imports were 20,610,000 pounds

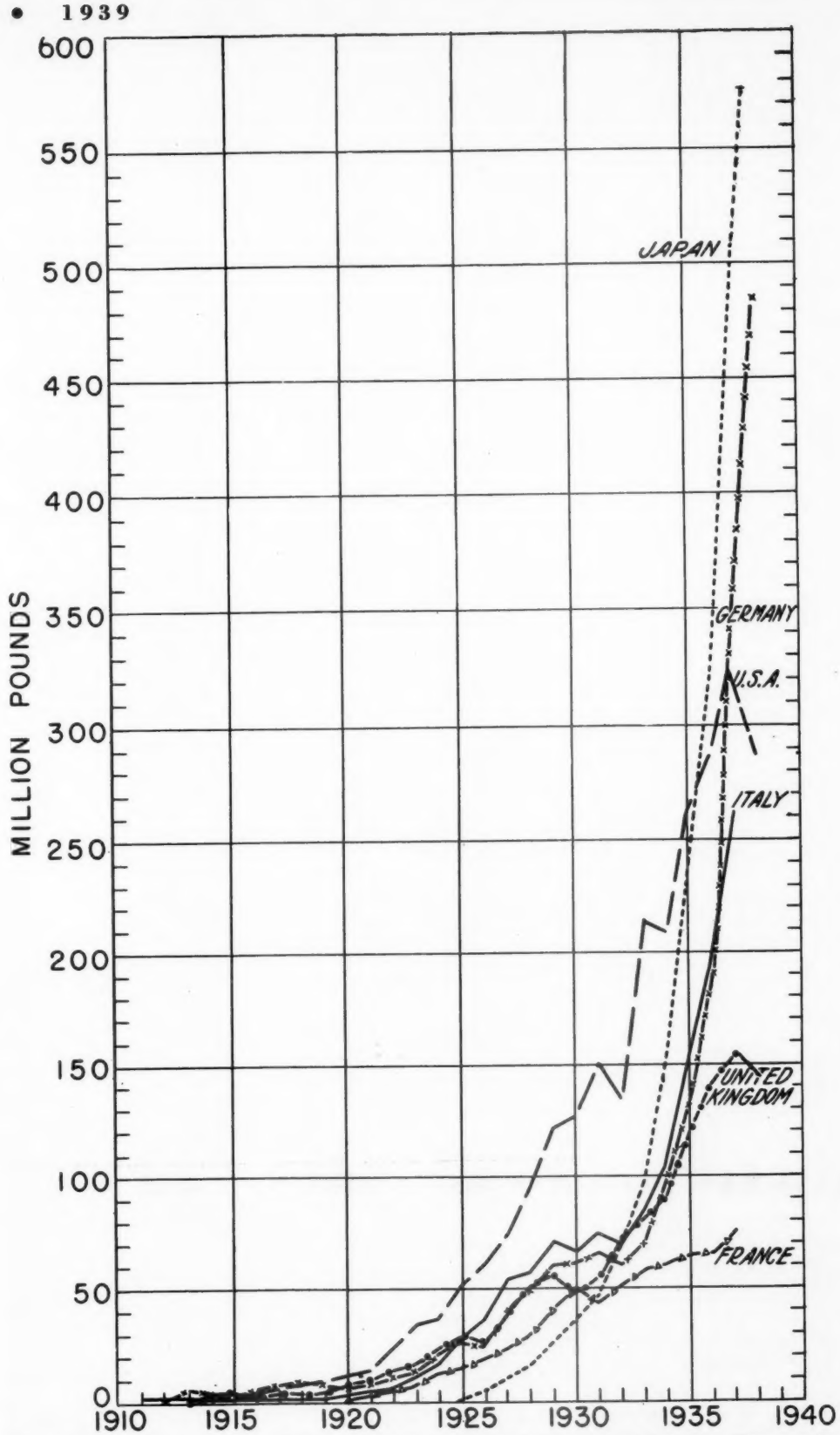
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United States Rayon Consumption in Millions of Pounds

	1938	1937	1936	1935	1934	1930
Rayon Filament Yarn	274	267	298	253	195	118
Rayon Staple Fiber	53	41	25	6	2	1
TOTALS	327	308	323	259	197	119

World Rayon Production in Millions of Pounds

	1938	1937	1936	1935	1934	1930
Rayon Filament Yarn	975	1,205	1,021	940	772	451
Rayon Staple Fiber	925	618	298	139	52	6
TOTAL	1,900	1,823	1,319	1,079	824	457



Source: Graph covering the period from 1911 through 1937 from the U. S. Department of Agriculture, "Report on Development and Use of Rayon and Other Synthetic Fibers." Additions for 1938: U. S. production from the Rayon Organon; for Japan, Germany and the United Kingdom from reports of the Bureau of Foreign & Domestic Commerce. Production during 1938 in Italy and France not available at the time of going to press.

PRODUCTION OF RAYON AND STAPLE FIBER BY COUNTRIES, 1911-1938, Showing the rapid and uninterrupted rise of production in Japan and Germany.



NOT LEATHER BUT PACIFIC COAST BLEACHED SULPHITE PULP ' ' ' This good looking zipper brief case is inexpensive and serviceable ' ' ' It is made from a special grade of Pacific Coast bleached sulphite pulp and rubber latex ' ' ' The chemical usage of wood cellulose is steadily expanding through its application to an increasing variety of manufactured products.

and in 1935 but 1,457,000 pounds. Domestic capacity has not as yet caught up with the quickening demand but expansions of staple fiber plants in 1938 will probably reduce the imports during 1939 or at least further curtail the rate of their growth.

The 1938 staple fiber imports of 23,500,000 pounds were equivalent to 11,750 short tons of dissolving wood pulp (assuming that 80 per cent of the staple fiber imported was viscose), which would be valued at the present market of $85 per ton at $1,020,000.

It is pointed out by the Rayon Organon that the decline in United States production of rayon in 1938 was due in part to the accumulation of heavy stocks toward the latter part of 1937. During 1938 these were absorbed while production was held down and hence the industry closed 1938 with a normal inventory.

Pacific Coast Pulp Capacity

● Pacific Coast bleached sulphite pulp mills have a capacity for producing high grade dissolving pulps for chemical uses of around 1,100 short tons per day or 333,000 short tons on a 300,000 operating days per year basis. Of this total 810 tons per day or 243,000 short tons per year capacity is located on the American side and 300 short tons per day or 90,000 short tons per year capacity is located on the Canadian side of the line.

Rayon's Progress

● During 1938 the rayon industry continued its steady improvement of yarn quality and broadened its market particularly through the increased application of staple fiber in the creation of new style fabrics in combination with the natural textiles.

Research continued unabated and it was announced that several new type rayon yarns would be marketed during 1938. Two new yarns were reported to be ready for competition with silk in the manufacture of women's hosiery, the last large market still dominated by silk. Specifications of the new yarns were not released to the public but it was understood they possessed the long sought elasticity which would enable them to compete with silk and also with Dupont Nylon, the new non-cellulosic synthetic fiber.

During 1938 the strong viscose yarns, such as Dupont's "Cordura," continued to increase in applications and usage. In 1937 this strong yarn was introduced in tire fabrics and quickly showed its superiority over cotton fabric in tires employed for heavy duty service. Passenger car tires were offered to public in 1938 and the tire manufacturers report the demand exceeds the available supply of the new yarns.

The past year witnessed a very important advance in the methods of manufacturing viscose yarns with the completion of the Industrial Rayon Corporation's continuous production plant at Painesville, Ohio. It has been predicted that the continuous production system will have a powerful influence not only upon the cost of producing viscose yarns but upon quality as well.

At the end of 1938 rayon yarn manufacturers predicted that 1939 would be a better year for rayon than 1938; pointed out the low prices of the yarns, the strong inventory position as contrasted with the end of 1937; and, emphasized the rayon industry's continued alertness to change and its continued emphasis on research to improve present yarns and to develop new types to broaden the industry's markets and still further stabilize its volume.

Rayon pulp producers throughout the world suffered from the dislocation of their markets caused primarily by Japan's drastically reduced imports of rayon pulp and secondarily by increased use of low grade materials such as straw by countries like Germany and Italy.

United States Rayon Yarn Producers

Viscose Process

American Enka Corp., Enka, North Carolina	1 plant
American Viscose Corp., Marcus Hook, Meadville and Lewiston, Pa., Roanoke and Front Royal, Va., Parkersburg and Nitro, West Virginia	7 plants
Delaware Rayon Co., New Castle, Delaware	1 plant
E. I. duPont de Nemours & Co., Inc., Buffalo, N. Y., Old Hickory,, Tenn., Richmond, Va., Seaford, Del.	4 plants
Hampton Company, Easthampton, Mass.	1 plant
Hartford Rayon Corporation, Rocky Hill, Conn.	1 plant
Industrial Rayon Corporation, Cleveland and Painesville, Ohio, Covington, Va.	3 plants
New Bedford Rayon Company, New Bedford, Mass.	1 plant
North American Rayon Corporation, Elizabethton, Tenn.	1 plant
Skenandoa Rayon Corporation, Utica, N. Y.	1 plant
Sylvania Industrial Corp., Fredericksburg, Va.	1 plant
Tubize Chatillon Corporation, Inc., Rome, Georgia	1 plant

Acetate Process

Celanese Corporation of America, Inc., Cumberland, M.D., and Pearisburg, Va.	2 plants
E. I. duPont de Nemours & Co., Inc., Waynesboro, Va.	1 plant
Tennessee Eastman Corp., Kingsport, Tenn.	1 plant
Tubize Chatillon Corp., Rome, Georgia	1 plant

Cuprammonium Process

American Bemberg Corp., Elizabethton, Tenn.	1 plant
New Process Rayons, Inc., Gloucester City, N. J.	1 plant

United States Cellulose Film Producers

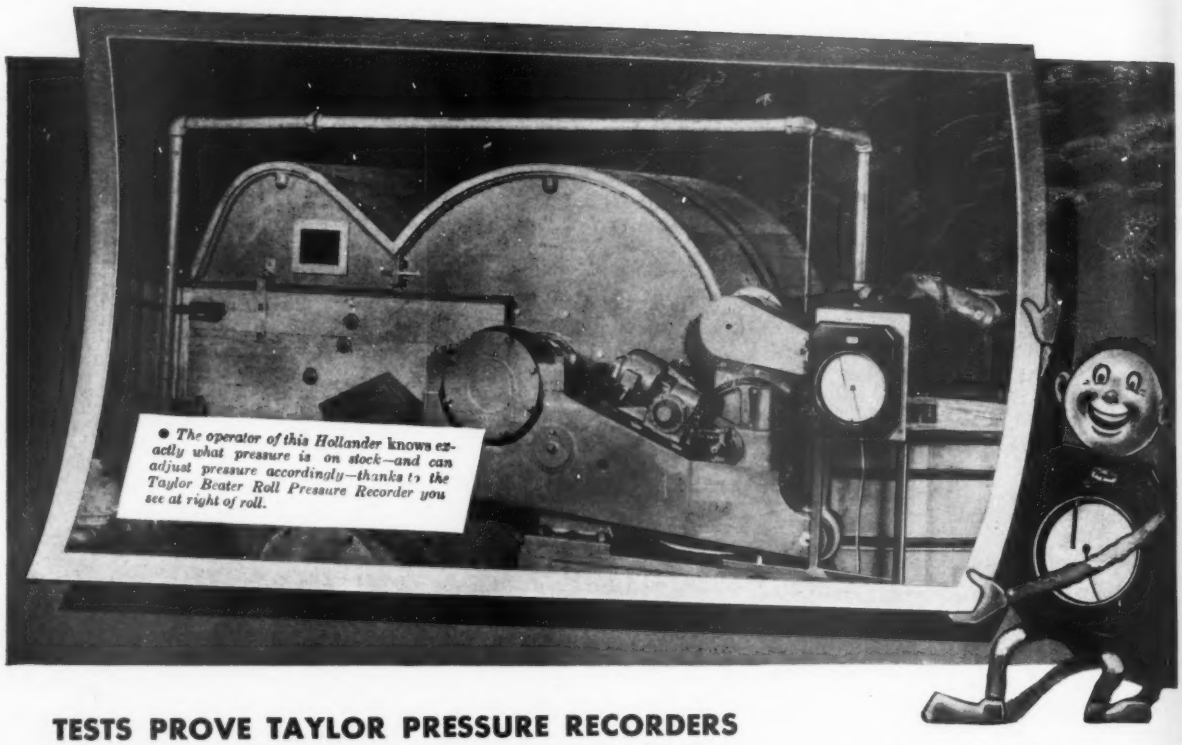
Viscose Process

E. I. duPont de Nemours & Co., Inc., Richmond, Va., Old Hickory, Tenn., Buffalo, N. Y.	3 plants
Sylvania Industrial Corporation, Fredericksburg, Va.	1 plant

Acetate Process

Celluloid Corporation of America, Newark, N. J.	1 plant
Eastman Kodak Company, Rochester, N. Y.	1 plant

27 MILLS FIND EASY WAY TO BEAT DOWN BEATER BILLS!



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YES, 27 leading mills—and 2 laboratories—found it pays handsomely to throw out sounding rods, and other hit-or-miss methods of judging beater roll adjustments and to replace them with Taylor Beater Roll Pressure Recorders! Here's why:

Exhaustive tests were made with a Taylor Recorder installed on beaters to record *actual* pressure on beater rolls—*the only really accurate way to check pressure on stock*. These tests proved that guessing at actual roll position causes uneven regulation that harms paper quality and eats up profits. One test showed amazed beater operators and superintendents that—unknown to them—pressure on stock varied 4400 lbs. on consecutive beating cycles. And here are the results of other tests:

Taylor Pressure Recorders can cut cost and improve paper quality like this because they write records of exact roll pressure that make possible steady, efficient roll regulation ... that enable engineers to work out ideal pressure and time schedules!

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Taylor Beater Roll Recorders have made possible these savings:

▶ **In one plant a 12% cut in beating time and a 12% increase in beating capacity. In another, a 5.5% cut in power consumption. And in a third, 100% increase in folding capacity. Important cuts in drying costs and more uniform stock.**

So plan to let a Taylor representative tell you more about this modern cost-cutting way to regulate beaters. There's no obligation. And write to us today for more facts. Taylor Instrument Companies, Rochester, N. Y. Plant also in Toronto, Canada. Manufacturers in Great Britain: Short & Mason, Ltd., London.

Pacific Coast Sales Offices—145 Mission St., San Francisco, Cal., and Central Bldg., Los Angeles. Also Terminal Sales Bldg., Portland, Ore. Repair facilities for all Taylor Instruments are available in San Francisco. For your protection, have adjustments or repairs to Taylor Instruments made by Taylor.

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These nations have found it difficult to acquire sufficient foreign exchange to finance the imports of necessary raw materials and consequently have turned to domestic materials which would very likely be uneconomical to use were foreign trade upon anything like a normal basis.

Japan's reduced exports of rayon textiles coupled with Germany and Italy's increased efforts to market rayon textiles through barter arrangements are causing a shifting of the world rayon textile picture.

The question that is probably uppermost in the minds of rayon pulp producers in Europe and America is whether Japan will again become a large buyer of rayon grade pulps. The Japanese say they will be independent of foreign pulp sources by 1942, but the slowness of pulp development in Manchukuo, which contributed but 14,000 odd short tons of rayon pulp in 1938, causes some producers to feel that the Japanese are overly optimistic about becoming self-sufficient in wood pulp production as early as 1942.

Consumption of Cellulose By the Rayon Industry

ESTIMATES of the refined cellulose consumed by the domestice rayon industry have been prepared by the Textile Economics Bureau, Incorporated, and published in the Rayon Organon for April, 1939. The following article accompanies the cellulose consumption table:

"The table below shows the total consumption of chemical cellulose by the rayon industry, as well as a breakdown of the total into wood pulp and cotton linters pulp. Also there is shown the approximate number of bales of raw cotton linters required to yield this refined linters pulp. The period covered is from 1930 to 1938 and the data are expressed in short tons and per cent.

"The data represent the amounts of refined cellulose consumed in the production of rayon (yarn plus staple fiber) and are not to be interpreted as the quantities of pulp purchased by the rayon industry.

"These data reveal the shifts which have occurred in the use of wood pulp and cotton linters pulp by the domestic rayon industry, especially for recent years. In 1930 and 1931 the total consumption of refined cellulose increased to meet the needs of the rayon industry's expanding production. During this two-year period both wood pulp and linter pulp obtained their proportionate share of this enlarging market, thereby maintaining their relative importance as sources of supply.

"From 1931 to 1934, the linters pulp increased its share of the total pulp consumed from 37 per cent of the total in 1931 to 44 per cent in 1934. This situation may be explained in part by the rapidly growing acetate process, which uses linters pulp exclusively, and in part by an increase in the proportionate use of linters pulp by the viscose process of manufacture.

"Beginning with 1935, the pendulum swung in the opposite direction as the consumption of wood pulp began to increase, while the consumption of linters pulp remained stable. This change in trend may be attributed to the decline in the use of linters pulp by the viscose process of manufacture, thereby offsetting the increasing use of linters pulp by the acetate process.

"In 1938 the tonnage consumption of wood pulp suffered a considerable decline, as the 1938 production of viscose rayon was reduced substantially below the 1937 level. On the other hand, the quantitative consumption of linters pulp in 1938 did not decline quite as much below the level of the previous year, primarily because the production of acetate rayon was not as severely curtailed as that of the viscose rayon. Percentagewise, however, wood pulp maintained its relative position by supplying the rayon industry with approximately three fourths of its pulp requirements.

● "The displacement of linters pulp by wood pulp, especially since 1935, has been motivated by several factors. First, wood pulp prices are lower and more stable than linters prices. Second, and equally important, the wood pulp producers have in recent years improved the quality of their pulp to the point where it is no longer necessary to use linters pulp to obtain the exacting chemical qualities desired in viscose rayon. High-alpha wood pulps also have been developed for use in the acetate process, but have not been used widely on a commercial scale to date."

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CELLULOSE CONSUMPTION BY THE U. S. RAYON INDUSTRY

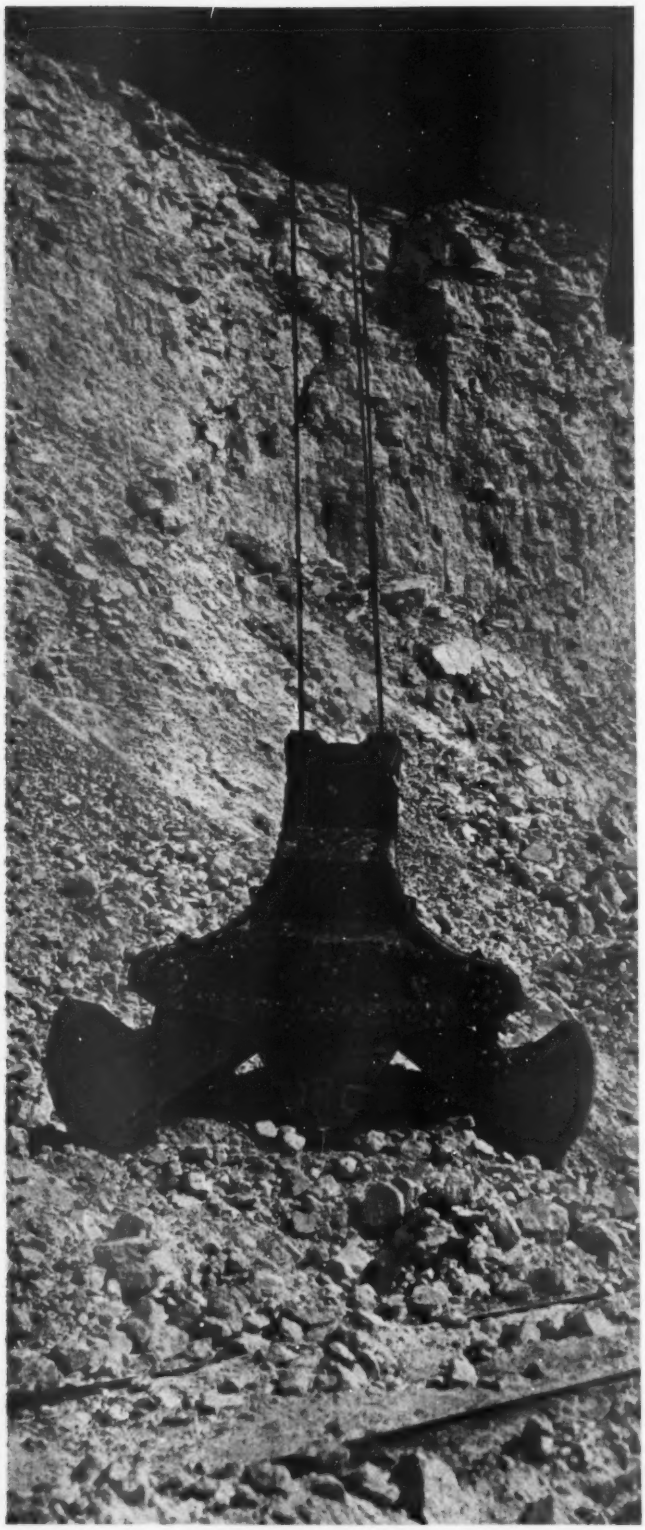
Short Tons of Refined Cellulose

	TOTAL PULP		WOOD PULP*		LINTERS PULP*		RAW COTTON LINTERS†
	Tons	Per Cent	Tons	Per Cent	Tons	Per Cent	Bales
1930	72,000	100	45,000	62	27,000	38	115,000
1931	84,000	100	53,000	63	31,000	37	132,000
1932	74,000	100	43,000	58	31,000	42	132,000
1933	115,000	100	65,000	57	50,000	43	213,000
1934	112,000	100	63,000	56	49,000	44	209,000
1935	137,000	100	86,000	63	51,000	37	218,000
1936	151,000	100	104,000	69	47,000	31	201,000
1937	178,000	100	133,000	75	45,000	25	192,000
1938	150,000	100	110,000	73	40,000	27	171,000

*Wood and linters in purified form as used by rayon producers.

†Bales of raw cotton linters figured on the basis of one-third overweight on refined linters pulp (due to refining losses) and converted to bales on the basis of 625 pounds net weight per bale.

Source: Rayon Organon, April, 1939.



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Approximate Prices of Rayon Grades of Cotton Linters Pulp and Wood Pulp, United States, 1929-1938

	Wood Pulp[1] Dollars Per Ton	Cotton Linters Pulp[2] Dollars Per Ton
1929	97-100	190
1930	75-95	165
1931	75-95	122
1932	70-75	102
1933	70	100
1934	70	128
1935	70	175
1936	70-72½	162
1937	70-72½	175
1938	95-97½[3]	115
	85[4]	.....

[1] Ex dock, nearest Atlantic or Gulf Port. Ex dock prices for 1929, 1930 and 1931 were estimated from prices F.O.B. pulp mills.
[2] F.O.B. pulp plant.
[3] January through April.
[4] May through December.
Bureau of Agricultural Economics. Based on price quotations furnished through the courtesy of several large producers of wood pulp and cotton linters pulp in the United States and Canada.

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Pulpwood Resources Of the Pacific Northwest

Data on available pulpwoods in Western Washington and Western Oregon revised in 1938 by the Pacific Northwest Forest & Range Experiment Station – Data for Northern Idaho revised in 1938 by the Northern Rocky Mountain Forest & Range Experiment Station

THE accompanying tables show the latest figures on the volume of pulpwoods, other than Douglas fir, available for cutting in western Washington and western Oregon.

They do not include timber on municipal watersheds, state and national forests, national parks, etc., which, because of laws or declared public policy, is not available for commercial use. The tables have also been adjusted to take into consideration the recent enlargement of the Olympic National Park in Washington.

In this region there is nearly eighty billion cubic feet of Douglas fir, about twice the volume of the true pulping species. This species is not included, but in view of recent progress in the pulping of this wood exeprimentally, it should be considered when analyzing the timber available for future use.

These figures are from data prepared by the Pacific Northwest Forest and Range Experiment Station, Portland, based on forest surveys started in 1930, and completed in 1933 and 1934. The results were first published in the Review Number of this journal in 1937, and revised in the 1938 Review Number. Reference may be made to the latter issue for greater detail as to the forest study.

Since completing the survey, the experiment station staff has started the work of re-inventorying each county through field examination. To date the recheck has been completed for five counties where the heaviest cutting has occurred: Grays Harbor, Pacific and Pierce counties in Washington; Clatsop and Columbia counties in Oregon. Two others, Coos county, Oregon, and Snohomish county, Washington, will be completed by the middle of this year, and work will be continued on the others. It is expected that the revisions will be finished at the rate of five or more counties per year.

● Figures on the counties named are based on the re-inventory. The other counties have been brought up to date by adjusting with the estimated depletion since the original survey, the depletion being determined from the timber cut figures.

Although the data are partially based on estimates of depletion, the figures have been rounded to thousands of cubic feet, and because of the large volume, the percentage of error can be considered relatively small. The tables are sufficiently accurate for all practical purposes.

The cubic foot volume estimates give the total sound wood content of the stem of the tree, exclusive of bark and limb wood. Decayed

Table I

Volume in thousand cubic feet[1] of pulp woods other than Douglas fir, in Western Washington and Western Oregon, available for cutting,[2] by species group.[3]

Species.	Western Oregon	Western Washington	Total
Western hemlock	5,958,000	16,569,000	22,527,000
Sitka spruce	1,095,000	1,352,000	2,447,000
Balsam firs[4]	3,515,000	6,669,000	10,184,000
Mountain hemlock and Engelmann spruce	946,000	353,000	1,299,000
Black cottonwood	68,000	123,000	191,000
Total	11,582,000	25,066,000	36,648,000

[1] Includes all trees 4 inches and more diameter breast height.
[2] Excludes timber reserved from cutting in municipal, State, and Federal ownership.
[3] Data from Pacific Northwest Forest and Range Experiment Station. Based on Forest Survey inventory of 1933 adjusted for estimated cutting depletion 1934-1937, inclusive.
[4] Includes silver fir, white fir, noble fir, Shasta red fir, lowland white fir, and alpine fir.

material is omitted, as well as the entire volume of all cull logs having more than two-thirds of the board-foot content deffective. No deduction is made, however, for breakage in logging.

The tables do not take into consideration the economic availability of the pulp species, that is, whether or not the timber could be profitably logged at this time. Table III, page 111 of the 1938 Review Number, gives this information. Changes through depletion make revision of this particular table impractical, but if desired, the reader may refer to the 1938 figures, since the percentages in each class of economic availability remain approximately the same at this time.

The ratio of timber in the various ownership classes also remains about the same. Approximately 46 per cent is privately owned, 42 per cent on national forest lands and 12 per cent on other public lands such as county, state, Indian reservations, etc.

Geographical distribution of pulpwood volume is shown by counties in Table II.

In the Inland Empire Area the data on pulpwood species in Northern Idaho, including Engelmann spruce, Western and mountain hemlock, white and alpine fir and black cottonwood, have been revised by the Northern Rocky Mountain Forest and Range Experiment Station at Missoula, Montana. It will be noted that with the exception of Engelmann spruce the figures have been revised upward from those published in the 1938 Review Number. The 1938 data for Northern Idaho included sawtimber stands only and also included zone 3 forests which have no probable conversion values.

The new Northern Idaho figures include the volume of unreserved sawtimber, pole and seedling and sapling stands that have present or potential value from a logging standpoint. They include the sound wood content of all trees larger than 5 inches, diameter, breast height to a 4- to 6-inch top diameter. Zone 3 forests have been deducted from the 1938 figures. The data for Northeastern Washington and for Western Montana remain unchanged.

INLAND EMPIRE PULPWOOD

Amount of pulpwood in the Inland Empire by species and localities in thousands of cubic feet*

Locality—	Pulp Timber Species: Engelmann spruce (M cubic feet)	Hemlock (M cubic feet)	White fir (M cubic feet)	Black cottonwood (M cubic feet)	Total All Species
Northeastern Washington	16,368	18,799	26,015	37	61,219
Northern Idaho	542,519	280,872	1,467,910	9,217	2,300,518
Western Montana	946,000	30,008	102,322	24,838	1,103,168
Total for Inland Empire	1,504,887	329,659	1,596,247	34,092	3,464,905

*Hemlock and white fir contain small amounts of mountain hemlock and alpine fir respectively.

Northeastern Washington includes Spokane, Stevens, and Pend Oreille Counties while northern Idaho includes 9 counties north of the Salmon River and all of Montana west of the Continental Divide is included in western Montana.

To convert cubic feet to board feet Scribner Decimal C log scale multiply Engelmann spruce figures by 5.92; hemlock and white fir by 6.12, and black cottonwood by 6.57.

Northern Idaho data revised in 1938. Includes the sound wood content of all trees larger than 5 inches d.b.h. to a 4- to 6-inch top diameter. Limbwood is included only for cottonwood. Data is exclusive of reserved forests and zone III forests which have no probable conversion value.

Source: Northern Rocky Mountain Forest & Range Experiment Station, Missoula, Mont.

Table II

Volume of pulp woods, other than Douglas fir, in Western Washington and Western Oregon available for cutting, by county.[1]

In thousands of cubic feet

Washington County		Oregon County	
Clallam	3,149,000	Benton	47,000
Clark	34,000	Clackamas	1,128,000
Cowlitz	906,000	Clatsop	1,274,000
Grays Harbor	2,699,000	Columbia	54,000
Island	9,000	Coos	421,000
Jefferson	2,789,000	Curry	185,000
King	2,149,000	Douglas	1,634,000
Kitsap	19,000	Hood River	296,000
Lewis	2,349,000	Jackson	960,000
Mason	448,000	Josephine	110,000
Pacific	1,839,000	Lane	1,564,000
Pierce	1,315,000	Lincoln	661,000
San Juan	11,000	Linn	1,459,000
Skagit	1,800,000	Marion	520,000
Skamania	1,825,000	Multnomah	34,000
Snohomish	2,225,000	Polk	192,000
Thurston	34,000	Tillamook	951,000
Wahkiakum	467,000	Washington	70,000
Whatcom	997,000	Yamhill	22,000
Total	25,066,000	Total	11,582,000

Includes all trees 4 inches and more diameter breast height.

[1] Compiled from Pacific Northwest Forest and Range Experiment Station data. Figures for Grays Harbor, Pacific, Pierce, Clatsop, and Columbia Counties based on 1937 and 1938 inventories. Data for other counties based on 1933 inventory adjusted for estimated depletion by cutting between 1933 and 1938.



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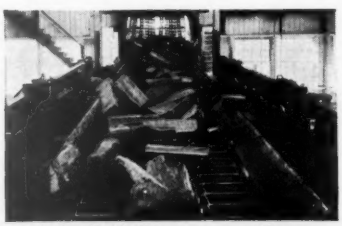
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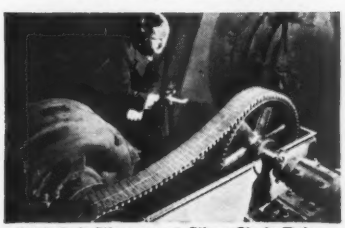
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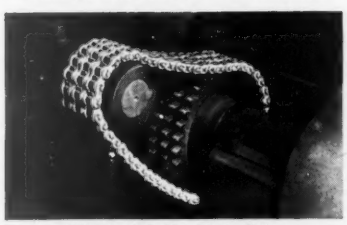

Belt Conveyor handling chips

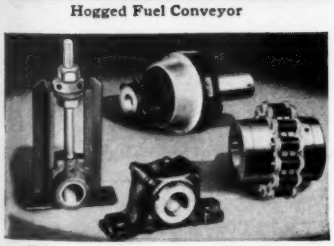

Screw Conveyor handling pulp

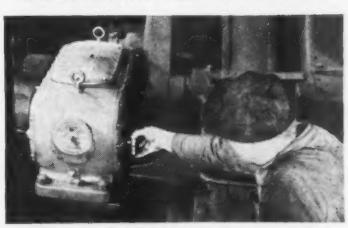

Picking Table Conveyor over chippers

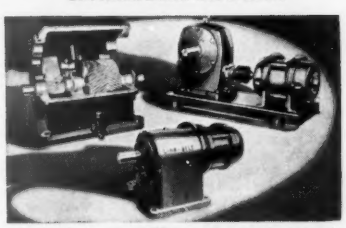

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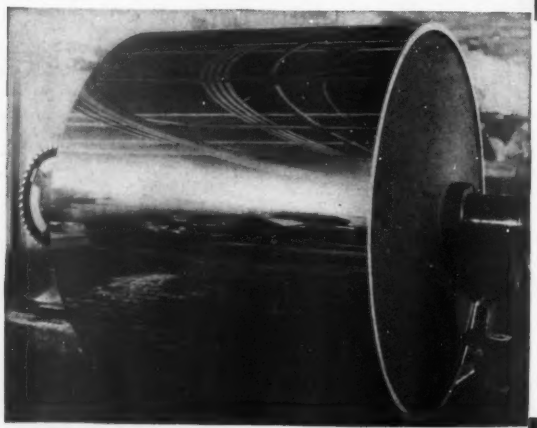
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Trade Agreements Undermine Price Structure of American Paper Industry

New British and Canadian Agreements Add to Problems of U. S. Paper Manufacturers

by WARREN B. BULLOCK, Manager
Import Committee, American Paper Industry

ON January 1, 1939 two new reciprocal trade agreements—those with Canada and the United Kingdom—went into effect, to add new competition to that already experienced by the Paper Industry through the operation of such other agreements as those with Sweden, Finland, France, Netherlands, Belgium, etc.

It is as yet too early to measure the effect of these agreements upon the Paper Industry. The following facts, however, are already of record:

Great Britain's export trade to the United States increased one million pounds sterling for the first quarter of 1939, as compared with the same quarter of 1938, while British imports of grain dropped in value three and a half million pounds sterling, tobacco one million, and cotton three and a half million.

British exports of carbonizing tissue on which the rate was reduced as of January 1 increased 125 per cent over the first two months of 1938 on the medium weight grades, and 150 per cent on the lighter weight grades. Imports of these papers in the past have aggregated about three quarters of a million dollars annually.

Imports of book paper from countries other than Canada, have increased over 1938, although the agreement with Canada which reduced this rate was supposed to be in the interest of the Dominion.

With detailed statistics available as yet for only two months of 1939 it is impossible to even estimate the results of these agreements on other grades of paper. That other grades still suffer proportionately may be assumed.

Meanwhile the adverse effects of the older agreements continue to be manifest. For instance, within a few weeks the prices of Machine Glazed kraft has dropped to such an extent that the return to the American mills will be about half a million dollars a year less than under the old prices. This reduction was forced on the American mills by the Swedish and Finnish producers who have been flooding the American market with low priced offerings. The loss to the American industry by this action involves a sum almost equal to the total value of the imported paper for all of 1938.

So far as the Paper Industry is concerned, both the Canadian and British Agreements resulted in concessions by the United States far in excess of any concessions made by the other two nations. Throughout the development of the reciprocal trade agreement program, the Paper Industry has been subjected to repeated duty reductions. In some cases the new rates are lower than any which have been in effect for a generation: in other cases they are below the so-called Underwood rates of 1913. In no case has the Paper Industry been given effective concessions by countries buying American paper, with the sole exception of Cuba. Because of the peculiar relationship of Cuba to the United States, the concessions jointly made in the Cuban agreement can hardly be considered a normal part of the reciprocal trade agreement program.

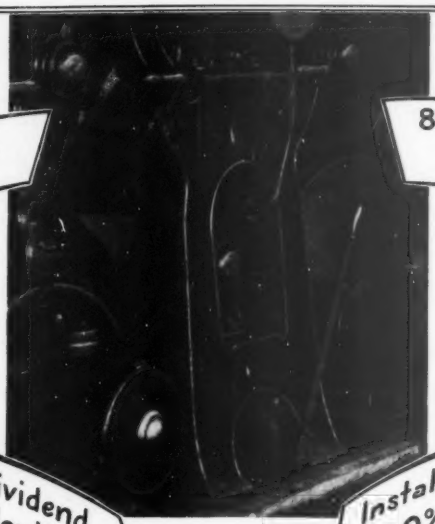
● Economic arguments as to the value of the reciprocal trade agreement program need not be considered here, but only the specific results of these agreements on the Paper Industry. These results are briefly summarized below.

United Kingdom — The trade agreement with the United States and the United Kingdom was entirely one-sided so far as paper is concerned. Great Britain made not one single concession on any kind of paper shipped from the United States. The United States reduced rates from 30 to 50 per cent on ten kinds of paper, besides binding others and reducing rates on various converted papers. A typical example is that of carbonizing tissue referred to above.

Canada—Exports from the United States to Canada of the thirteen principal types of paper exported totaled a value of $1,825,000 in 1937. Imports of dutiable paper from Canada in the same year had a total value of $1,375,000. Under the reciprocal trade agreement Canada reduced several rates, including the following: Miscellaneous paper, rate reduced from 25 to 22½ per cent; wrapping paper, from 35 per cent to 25 per cent (the United States rate is now 20 per cent on kraft, and other wrapping 25 per cent); coated paper from 35 to 37½ per cent. There were reductions of 2½ to 5 per cent on various forms of converted paper, such as books. Through extending to the United States most favored nation privileges, an automatic duty reduction of a small percentage became applicable to imports of other grades of paper. The duty rate on standard newsprint paper, for instance, was reduced from 15 to 12½ per cent; the United States permits duty free entry of such paper, and Canada's shipments to this country in 1937 totaled nearly $110,000,000 in value.

Of the $1,375,000 of dutiable paper imported from Canada about $1,000,000 is represented by two items, pulpboard and printing paper, and these two items are among the eight on which the United States reduced duty rates. The duty rate on pulpboard in rolls for use in the manufacture of wallboard was cut 50 per cent. That on printing paper was reduced from ¼ cent per pound and 10 per cent to 1/5 cents per pound and 5 per cent. Based on the value of the principal grades shipped, this is equivalent to a reduction of over 40 per cent. Further, this reduction is on the grade of paper of which American mills turned for continued existence when the placing of newsprint on the free list drove American mills to other production fields.

When the Canadian agreement was under negotiation, the Canadian Paper Industry notified its Government that it was asking no concessions in the rates on its exports to the United States. The American Paper Industry took the same step as regards Canadian rates. The reduction in rates was therefore af-



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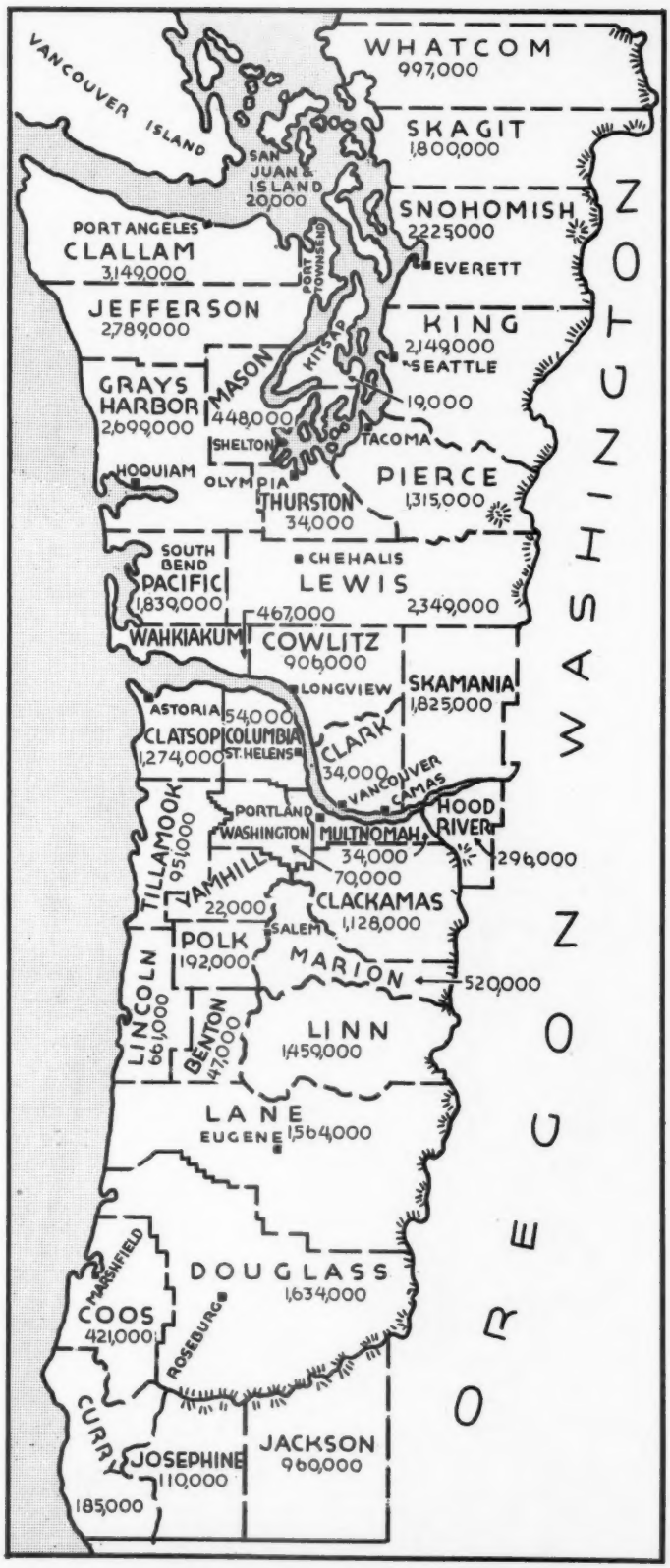
fected against the expressed wish of the manufacturers who might be considered to be benefitted.

This mutual attitude has been all that has prevented a great increase in exports in each direction. The Paper Industry in each country realizes that mutual prosperity is too advantageous to be destroyed by price-cutting sales campaigns and increases in shipments have not, therefore, been as great as would otherwise have been the case. The commercial good sense of Paper manufacturers has thus outweighed the economic theories of low tariff advocates in each nation.

Other Agreements — The trade agreements with Sweden and Finland reduced the rate of duty on kraft wrapping paper—the type so extensively made in the South—from 30 to 20 per cent. The immediate result was a rush of imports at prices which the American mills could not meet without loss. Imports in 1934, before these trade agreements were effective totaled 4,000 tons. Imports in 1935 increased to 12,000 tons, in 1936 to 24,000 tons, in 1937 to 16,000 tons, and in 1938 to 13,000 tons. This is a total net increase over 1934 of 53,000 tons. If this 53,000 tons had been produced in the United States, as would undoubtedly have been the case except for the reduction in duty, work would have been provided to a total of 300,000 full time days of employment. This would have meant an addition of $1,000,000 to American paper mill pay rolls. Inasmuch as Scandinavian paper mill wages are less than half those paid by American mills, this means that the reciprocal trade agreements took $1,000,000 from the pay rolls of American workers in order that $500,000 might be added to the incomes of Scandinavian workmen.

These figures take no account of the indirect effect of lost business to the kraft paper industry as a whole. **• Taking the Paper Industry as a whole the net effect of the reductions in duty rates has been to deprive paper mill employees of work, to reduce the nation's revenue, to unduly lower the price of the American product, and to impair the investment of the Government in a loan of several million dollars to a kraft paper mill.**

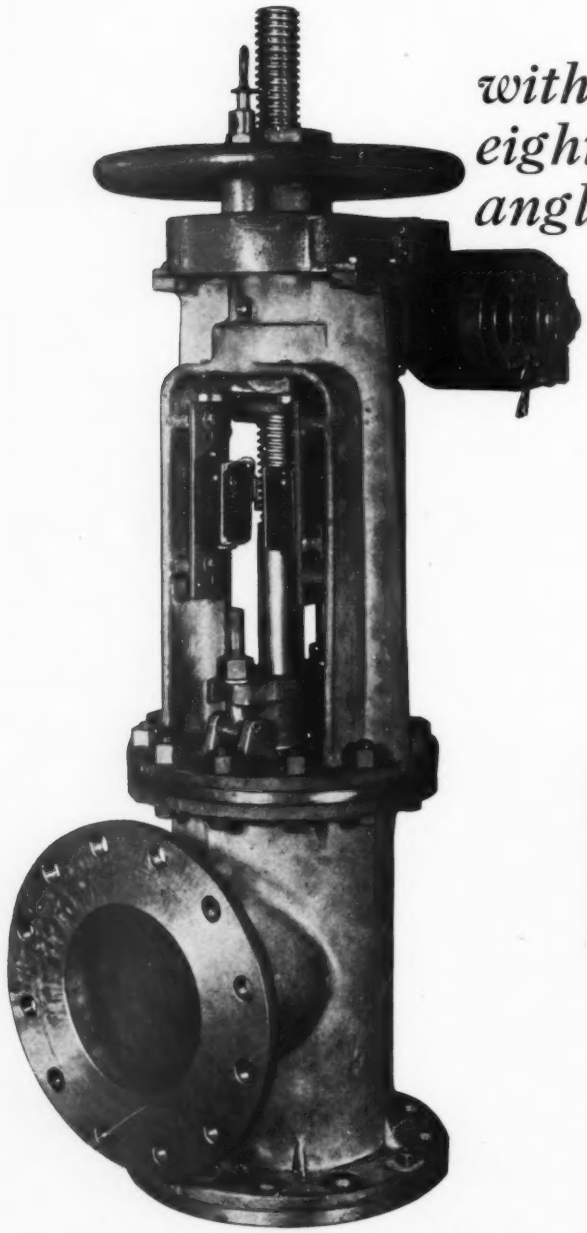
The Administration theory is that the reciprocal agreements produce more business for certain industrial groups. The Paper Industry appears to have been selected for sacrifice in the interest of other more favored groups.



The above map of Western Oregon and Western Washington shows by counties the total volume in thousands of cubic feet of pulpwood, other than Douglas fir . . . Revised in 1938.

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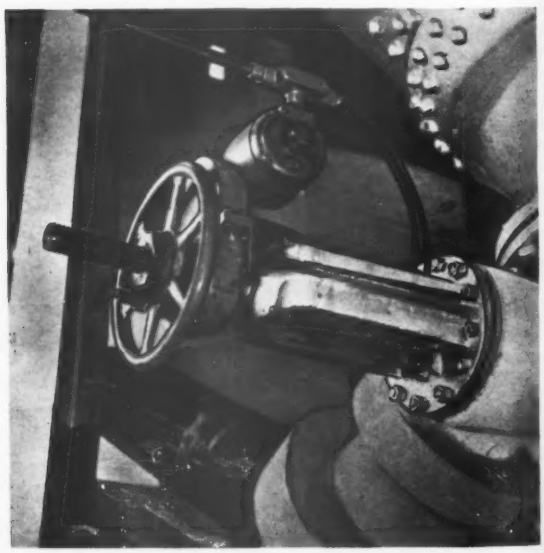
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The 1937 Census of Manufactures For the Pulp and Paper Industries

Show Gains in Employment and Value of Products Over 1935 and 1933

Pulp

• Manufacturers of pulp reported a moderate increase in employment and considerable increase in wages and production for 1937 as compared with 1935, as shown by the preliminary figures compiled from returns of the recent Biennial Census of Manufactures, released by Director William L. Austin, Bureau of the Census, Department of Commerce.

The number of wage earners employed in 1937 was 26,994, an increase of 14.3 per cent over the 23,627 reported for 1935, and wages paid in the industry increased 43.5 per cent, from $23,401,212 for 1935 to $33,570,346 for 1937. The total value of all products made in the industry in 1937, $247,191,957, exceeded the 1935 figure, $167,208,261, by 47.8 per cent.

The total production of pulp (wood and other fiber) increased from 5,032,299 tons, valued at $165,322,781, in 1935 to 6,757,842 tons, valued at $244,667,297, in 1937, the rates of increase being 34.3 per cent for quantity and 48 per cent for value.

The total consumption of pulpwood in 1937 amounted to 10,393,800 cords, costing $82,884,799, of which 6,934,234 cords, costing $52,228,129, were contributed by yellow pine, and domestic spruce and hemlock.

This industry, as classified for census purposes, embraces establishments engaged primarily in the production of pulp from wood and other fiber. The greater part of the pulp produced is consumed by paper mills operated in conjunction with pulp mills.

Statistics for 1937, with comparative figures for earlier years, are given in the accompanying tables. Table 1 gives summary statistics for 1937, 1935, and 1933, table 2 shows the production of pulp by kind and value, for 1937 and 1935, and table 3 shows the pulpwood consumption by kind of wood, quantity, and cost for the same years. All figures for 1937 are preliminary and subject to revision.

Paper

• A slight increase in employment and considerable increases in wages and value of products in the paper industry for 1937 as compared with 1935 are shown in the preliminary figures compiled from returns of the recent Biennial Census of Manufactures.

The number of wage earners increased 7.2 per cent, from 103,344 in 1935 to 110,809 in 1937, while their wages increased 28.9 per cent, from $110,200,308 to $142,079,857. The value of products increased 34.6 per cent, from $711,793,299 to $957,939,764.

The production of paper and paperboard in 1937 amounted to 12,837,003 tons, valued at $895,439,687, f.o.b. factory prices—increases of 22.5 per cent in quantity and 36.5 per cent in value as compared with 10,479,095 tons, valued at $656,115,565 for 1935.

This industry, as classified for census purposes, embraces establishments engaged primarily in the manufacture of paper and paperboard.

Table 1 gives summary statistics for 1937, 1935, and 1933 and table 2 shows the production, by kind, quantity, and value, for 1937 and 1935. All figures for 1937 are preliminary and subject to revision.

TABLE I

Summary for the Pulp Industry: 1937, 1935, and 1933

(Because they account for a negligible portion of the national output, plants with annual production valued at less than $5,000 have been excluded since 1919)

	1937	1935	1933	Percentage Increase 1935-37	Percentage Increase 1933-37
Number of establishments[1]	194	188	181	3.2	7.2
Wage earners (average for the year)[2]	26,994	23,627	20,074	14.3	34.5
Wages[2]	$33,570,346	$23,401,212	$18,103,342	43.5	85.4
Cost of materials, supplies, containers, fuel, and purchased electric energy[3]	$153,651,946	$96,176,352	$81,896,058	59.8	87.6
Value of products[3]	$247,191,957	$167,208,261	$134,691,766	47.8	83.5
Value added by manufacture[4]	$93,540,011	$71,031,909	$52,795,708	31.7	77.2

[1] The 194 establishments reporting for 1937 represent mills operated, including 7 that manufactured pulp from materials other than wood. The 188 establishments reporting for 1935 operated 190 mills, including 6 that manufactured pulp from materials other than wood. The 181 establishments reporting for 1933 operated 185 mills, including 8 that manufactured pulp from materials other than wood.

[2] Not including salaried officers and employees. Data for such officers and employees will be included in a later report. The item for wage earners is an average of the numbers reported for the several months of the year. In calculating it, equal weight must be given to full-time and part-time wage earners (not reported separately by the manufacturers), and for this reason it exceeds the number that would have been required to perform the work done in the industry if all wage earners had been continuously employed throughout the year. The quotient obtained by dividing the amount of wages by the average number of wage earners cannot, therefore, be accepted as representing the average wage received by full-time wage earners. In making comparisons between the figures for 1937 and those for earlier years, the possibility that the proportion of partime employment varied from year to year should be taken into account.

[3] Profits or losses cannot be calculated from the Census figures because no data are collected for certain expense items, such as interest, rent, depreciation, taxes, insurance, and advertising.

[4] Value of products less cost of materials, supplies, containers, fuel, and purchased electric energy.


WEST COAST HEMLOCK PULP
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TABLE II

Pulp Products, by Kind, Quantity, and Value: 1937 and 1935

	1937		1935	
	Tons (2,000 pounds)	Value (f.o.b. mill)	Tons (2,000 pounds)	Value (f.o.b. mill)
Pulp industry, all products, total value	.....	$247,191,957	.....	$167,808,261
Pulp (wood and other fiber)	6,757,842	244,667,297	5,032,299	165,322,871
Products other than pulp (not normally belonging to the industry	.....	2,524,660	.....	1,885,390
Wood pulp, total	6,617,184	227,796,971	4,925,669	149,981,900
Mechanical, total	1,600,667	30,315,251	1,355,819	24,972,104
Not steamed	1,513,047	28,281,135	1,205,199	22,224,975
Steamed	87,620	2,034,116	150,620	2,747,129
Sulphite, total	2,162.771	111,029,418	1,579,567	70,425,758
Unbleached	814,102	31,827,729	634,947	21,909,660
Bleached, total	1,348,669	79,201,689	944,620	48,516,098
Superpurified and rayon and special chemical grades[1]	353,640	23,871,039	189,536	11,987,887
Other bleached	995,029	55,330,650	755,084	36,528,211
Sulphate, total	2,160,826	60,552,279	1,467,749	36,008,886
Unbleached	1,945,676	52,211,166	1,340,288	31,213,254
Bleached	215,150	8,341,113	127,461	4,795,632
Soda, unbleached and bleached, total	507,548	23,465,719	.....	.....
			[2]485,162	[2]18,165,468
Semi-chemical and other wood pulp, total	132,521	1,748,316	.....	.....
Screenings, total	52,851	685,988	37,372	409,684
Mechanical	9,674	69,667	3,902	22,146
Chemical	43,177	616,321	33,470	387,538
Other pulp[3]	140,658	16,870,326	106,630	15,340,971

[1] Combined to avoid disclosing data for individual establishments for 1937. The production of superpurified pulp in 1935 was reported as 63,066 tons, valued at $4,817,774.

[2] Soda and semi-chemical pulp only. Combined to avoid disclosing production reported by an individual establishment.

[3] Cottonseed-hull-fiber pulp, cotton-linter pulp, rag pulp, and reclaimed paper and straw pulp.

TABLE III

Pulpwood Consumption—Quantity and Cost, by Kind of Wood: 1937 and 1935

	1937		1935	
Kind of Wood.	Cords	Cost	Cords	Cost
Total	10,393,800	$82,884,799	7,628,274	$58,243,652
Spruce:				
Domestic	2,010,720	21,980,698	1,755,112	17,906,240
Imported	826,528	10,743,365	625,462	7,835,799
Yellow pine, Southern	2,658,949	14,498,259	1,785,228	8,527,145
Hemlock:				
Domestic	2,264,565	15,749,172		
Imported	37,447	280,575	1,521,271	10,234,560
Poplar:				
Domestic	441,401	3,899,639	333,773	2,661,247
Imported	90,365	960,930	54,283	604,664
Balsam fir:				
Domestic	320,715	3,269,690	298,812	2,597,798
Imported	71,447	767,243	54,313	583,266
Jack pine, domestic and imported	300,786	2,863,084	[1]224,538	[1]1,799,425
Beech, birch, and maple	257,410	2,302,036	152,054	1,280,443
White fir, domestic and imported	135,384	769,446	[1]174,075	[1]880,728
Red gum	25,967	165,750	[2]29,299	[2]191,893
Tamarack (larch)	8,945	84,057	9,587	69,638
Cottonwood	64,035	432,366		
Yellow poplar	47,882	435,966	317,675	1,867,727
Douglas fir	45,665	184,948		
Other woods[3]	220,198	1,494,497		
Slabs and mill waste	565,391	2,003,078	292,792	1,223,079

[1] Domestic only.

[2] Reported as "Gum" for 1935.

[3] For 1937, domestic ash, basswood, black gum, chestnut, elm, oak, and miscellaneous hardwoods not reported separately. For 1935, see published report.

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TABLE I

Summary for the Paper Industry: 1937, 1935, and 1933

(Because they account for a negligible portion of the national output, plants with annual production valued at less than $5,000 have been excluded since 1919)

	1937	1935	1933	Percentage Increase 1935-37	Percentage Increase 1933-37
Number of establishments[1]	647	591	600	9.5	7.8
Wage earners (average for the year)[2]	110,809	103,344	87,224	7.2	27.0
Wages[2]	$142,079,857	$110,200,308	$81,090,682	28.9	75.2
Cost of materials, supplies, fuel, and purchased electric energy[3]	$567,449,130	$429,113,355	$311,766,966	32.2	82.0
Value of products[3]	$957,939,764	$711,793,299	$560,962,625	34.6	70.8
Value added by manufacture[4]	$390,490,634	$282,679,944	$249,195,659	38.1	56.7

[1] The 647 establishments reporting for 1937 represent mills operated. The 591 establishments reporting for 1935 operated 617 mills. The 600 establishments reporting for 1933 operated 610 mills.

[2] Not including salaried officers and employees. Data for such officers and employees will be included in a later report. The item for wage earners is an average of the numbers reported for the several months of the year. In calculating it, equal weight must be given to full-time and part-time wage earners (not reported separately by the manufacturers), and for this reason it exceeds the number that would have been required to perform the work done in the industry if all wage earners had been continuously employed throughout the year. The quotient obtained by dividing the amount of wages by the average number of wage earners cannot, therefore, be accepted as representing the average wage received by full-time wage earners. In making comparisons between the figures for 1937 and those for earlier years, the possibility that the proportion of part-time employment varied from year to year should be taken into account.

[3] Profits or losses cannot be calculated from the Census figures because no data are collected for certain expense items, such as interest, rent, depreciation, taxes, insurance, and advertising.

[4] Value of products less cost of materials, supplies, fuel, and purchased electric energy.

TABLE II

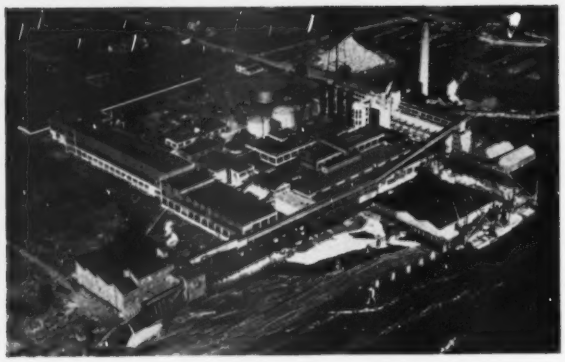
Paper and Paperboard—Production, by Kind, Quantity, and Value: 1937 and 1935

(The schedule used for 1935 did not call for data in as much detail as that used for 1937, and consequently some of the figures in this table are not strictly comparable for the two years)

Kind.	1937 Quantity (short tons)	1937 Value	1935 Quantity (short tons)	1935 Value
1. Paper industry, all products, total value	.....	$957,939,764	.....	$711,793,299
Paper and paperboard:				
2. Produced for sale	9,419,125	686,427,937	7,702,807	502,269,724
3. Produced for transfer to other plants of same company	2,364,481	137,166,446	1,786,584	92,339,264
4. Products other than paper and paperboard (not normally belonging to the industry)	.....	134,345,381	.....	117,184,311
5. Paper and paperboard produced for use in same plant	1,053,397	71,845,304	989,704	61,506,577
Paper and paperboard, aggregate (sums of 2, 3, and 5)	12,837,003	$895,439,687	10,479,095	$656,115,565
Newsprint, standard, in rolls and sheets	960,663	36,498,374	947,717	33,353,967
Groundwood printing and specialty papers	492,972	30,378,097	274,154	16,142,571
Book paper, total	1,561,074	150,170,447	1,281,870	112,608,975
Cover paper	24,437	4,435,204	20,806	3,710,430
Writing paper (fine), total	578,147	87,271,592	507,325	70,619,934
Wrapping paper, total	2,053,387	179,734,517	1,632,054	127,058,538
Sulphite	678,329	69,963,724	421,111	40,223,096
Kraft	1,130,033	86,142,532	984,784	66,179,671
Other	245,025	23,628,261	226,159	20,655,771
Tissue paper, total	540,152	63,433,450	473,214	46,235,141
Absorbent paper, total	138,064	22,120,473	95,179	15,911,243
Building paper, total	608,086	32,630,126	440,704	19,449,767
Other paper	77,985	11,427,872	110,182	10,921,673
Boards, total	5,802,036	277,399,535	4,695,890	200,103,326
Container boards	3,167,550	134,403,314	2,358,093	88,459,767
Liners	2,144,568	95,626,113	1,601,189	64,177,141
Chip (plain and test)	506,013	18,457,834	410,489	11,948,682
Straw (for corrugated-container use)	441,312	16,895,781	436,415	12,333,944
Other container boards	75,657	3,423,586	(1)	(1)
Folding boxboards	1,289,024	67,198,742	1,120,546	51,696,424
Set-up boxboards (nonbending)	720,310	29,753,939	623,890	22,912,560
Binder's board	51,913	3,620,887	61,603	4,351,752
Cardboard	51,318	4,167,531	30,796	1,934,356
Bristol board	73,539	8,444,593	72,257	6,834,189
Leatherboard	27,174	2,238,888	26,759	2,156,678
Pressboard	8,623	1,521,648	7,216	947,224
Other boards[2]	412,585	25,989,993	394,730	20,810,376

[1] Included with data for "Other boards."

[2] Figures include data for "wallboards," "insulating board," and "other building boards" as follows: For 1937, 110,005 tons, valued at $5,823,409; for 1935, 79,814 tons, valued at $3,800,436.



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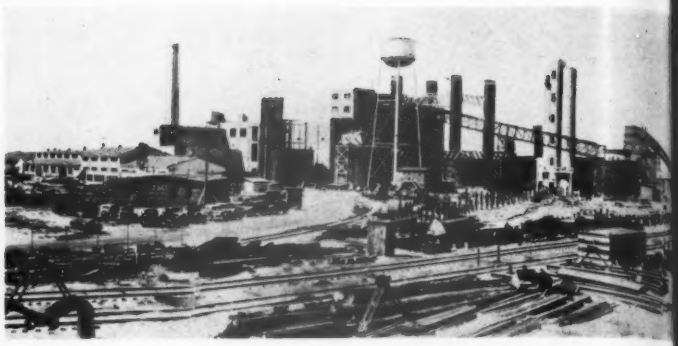
Port Angeles Division — Port Angeles, Washington



Shelton Division — Shelton, Washington



Tacoma Division — Tacoma, Washington



Fernandina Division — Fernandina, Florida
(Under Construction)

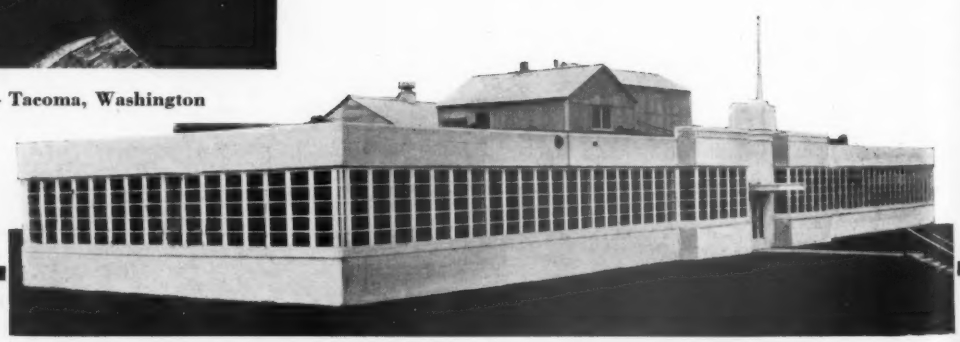
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Foreign Pulp Producers Exported Less in 1938

Canadian pulp exports down 36.4% below 1937 level – Swedish exports decline 20.7% – Norwegian exports off 20% – Finnish producers exported 15% less than in 1937 and German pulp exports dropped 55%

• The leading wood pulp exporting countries, Canada, Sweden, Norway, Finland and Germany, all exported far less wood pulp in 1938 than in 1937. Buying countries all consumed less pulp in paper manufacture and heavy inventories on hand at both buyers' and sellers' mills at the beginning of the year held down the exports during the year.

Sweden exported a total of 2,491,447 short tons of all grades of wood pulp in 1938 as compared with 3,142,164 short tons in 1937, a decline of 650,717 short tons or 20.7 per cent. Unbleached sulphate suffered the largest export loss, from 892,058 short tons in 1937 to 634,806 short tons in 1938, a reduction of 257,252 short tons or 28.8 per cent.

Swedish exports of bleached sulphate showed an increase of 6 per cent, from 96,116 short tons in 1937 to 102,258 short tons in 1938.

The second largest reduction in Swedish pulp exports last year was in unbleached sulphite, which dropped from 1,002,331 short tons to 781,027 short tons, a loss of 221,304 short tons or 22 per cent. The bleached sulphite reduction was 21.3 per cent from the 1937 high level, from 433,278 short tons in 1937 to 340,802 short tons in 1938, a reduction of 92,476 short tons. Mechanical wood pulp exports declined 12 per cent, from 718,381 tons in 1937 to 632,554 short tons in 1938, a drop of 85,827 short tons.

Canadian Exports Down 36.4%

• Exports of wood pulp from Canada in 1938, all classes, were reported by the Dominion Bureau of Statistics to be 554,037 short tons valued at $27,730,738, as compared with exports of 870,711 short tons valued at $41,815,731 in 1937. The decline was 316,674 short tons or 36.4 per cent and $14,084,993 or 33.6 per cent in value. The 1938 exports from Canada were but 55.3 per cent of the record year of 1926 when 1,003,081 short tons were exported.

Exports of bleached sulphite from Canada in 1938 amounted to 236,438 short tons in 1938 with a declared value of $15,742,741, as compared with 369,874 short tons valued $22,099,127 in 1937. The decline in tonnage exported was 36 per cent. Unbleached sulphite pulp exports from Canada during 1938 totaled 98,835 short tons valued at $4,048,165, as compared with 176,266 short tons valued at $7,907,788 in 1937. The decline in tonnage was 44 per cent.

Sulphate pulp exports, bleached and unbleached are lumped in the export statistics, were 76,286 short tons valued at $4,435,757 last year, as compared with 122,780 short tons valued at $6,765,430 in 1937. The decline in tonnage amounted to 38 per cent. Screenings exported amounted to 8,234 short tons valued at $99,163 in 1938 compared with 23,650 tons valued at $312,608 in 1937.

The average value of bleached sulphite exported from Canada last year was $66.58 per short ton as compared with $59.74 per short ton in 1937. The increase was due to a higher price for rayon grades in the first half of the year and to the rayon grades exports maintaining a larger proportion of their 1937 tonnage than did the paper grades of bleached sulphite. The average value of unbleached sulphite exported from Canada last year was $40.95 per short ton as compared with $44.85 in 1937. Kraft pulp exports averaged $58.14 per short ton in 1938 against $55.10 in 1937. This was due to the exports of high grade bleached kraft pulp holding up better than did the unbleached kraft exports.

The United States took 81.9 per cent of Canada's wood pulp exports against 80.2 per cent in 1937 and 84.9 per cent in 1936. The 81.9 per cent of the total which was taken by the United States, amounted to 453,856 short tons valued at $21,561,546.

Exports From Finland

• Exports of wood pulp from Finland in 1938 totaled 1,373,060 short tons as compared with 1,619,854 short tons in 1937, a decline of

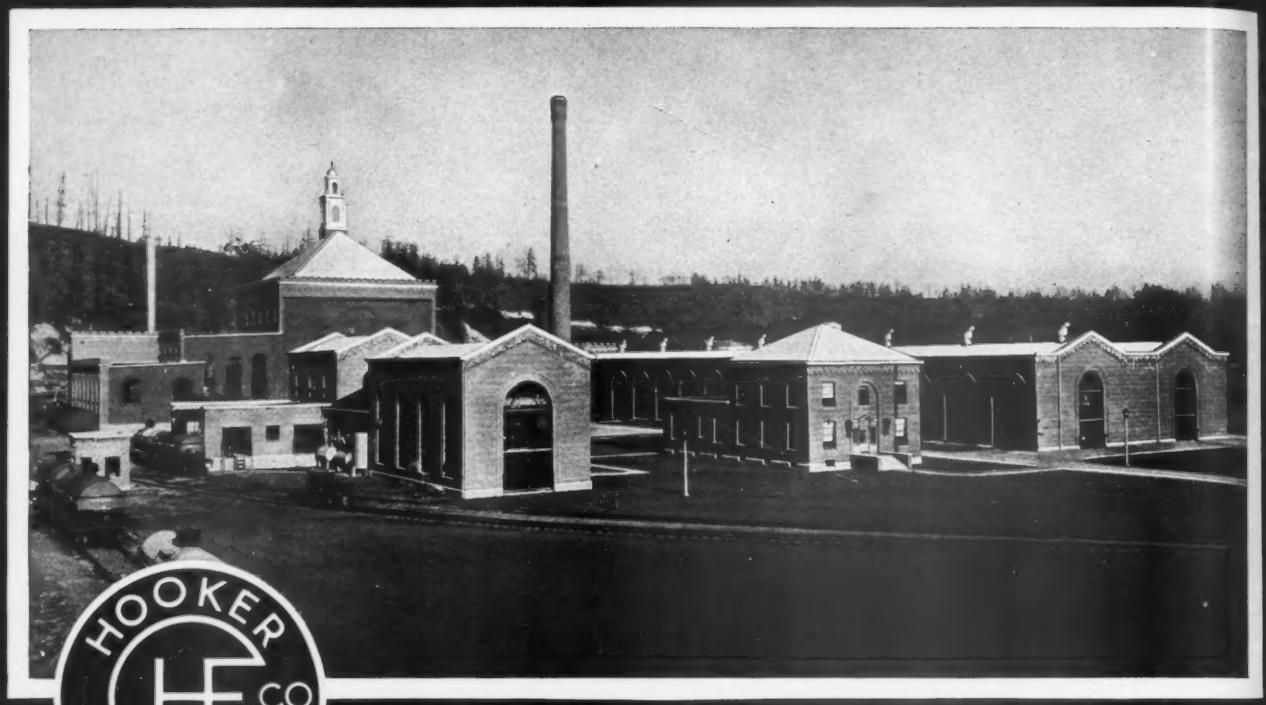
Canadian Exports by Countries of Destination

1938

(Short Tons)

	Bleached Sulphite	Unbleached Sulphite	Sulphate	Other	Mechanical	Screenings	Total
United States	177,822	79,246	73,814	9,402	105,342	8,234	453,860
Great Britain	29,001	19,187	613	30	18,863	.....	67,694
Japan	16,506	.....	.....	.....	.....	.....	16,506
France	7,337	.....	1,075	.....	.....	.....	8,412
Italy	5,133	.....	.....	.....	.....	.....	5,133
Belgium	251	.....	11	222	.....	.....	484
Dutch East Indies	358	125	.....	.....	.....	.....	483
Germany	.....	.....	473	.....	.....	.....	473
Brazil	.....	.....	.....	360	.....	.....	360
China	.....	277	.....	.....	.....	.....	277
Australia	.....	.....	202	.....	.....	.....	202
Switzerland	.....	.....	48	.....	.....	.....	48
Netherlands	.....	.....	38	.....	.....	.....	38
Others	30	.....	12	25	.....	.....	67
Total	236,438	98,835	76,286	10,039	124,205	8,234	554,037

Source: United States Pulp Producers Association.



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FERRIC CHLORIDE - ANTIMONY CHLORIDE

246,794 short tons or 15.2 per cent. Sulphite pulp exports from Finland in 1938 amounted to 860,368 short tons as compered with 906,011 short tons in 1937, a decline of 45,643 tons or 5 per cent.

Sulphate pulp exports from Finland in 1938 amounted to 475,028 short tons as against 475,862 short tons in 1937, a decline of but 834 short tons.

Finnish exports of mechanical wood pulp in 1938 totaled 449,688 short tons as compared with 574,508 short tons exported in 1937, a decline of 124,819 short tons.

Norwegian Exports Down 20%

• Exports of wood pulp from Norway in 1938 amounted to 857,508 short tons of all grades in 1938 as compared with 1,075,065 short tons in 1937, a reduction of 217,557 short tons.

Bleached sulphite exports from Norway during 1938 were 230,797 short tons, 67,928 short tons below the 298,725 tons exported in 1937. Unbleached sulphite exports last year reached a total of 49,179 short tons as compared with 80,114 short tons in 1937, a decline of 30,935 short tons. Unbleached sulphate pulp exports from Norway last year amounted to 19,322 short tons while in 1937 32,314 short tons were exported, a decline in 1938 of 12,992 short tons.

German Pulp Exports Decline

• Germany's exports of wood pulp dropped drastically in 1938 as ompared with 1937. The 1938 exports of all grades were but 81,926 short tons as compared with 182,016 short tons in 1937, a decline of 100,090 short tons or 55 per cent.

Data on exports from Germany by grades was not available at the time of going to press.

German Exports of Chemical Pulp — 1938

Short Tons

United States	26,248
France	14,330
Great Britain	8,948
Brazil	3,227
Netherlands	2,005
Hungary	3,951
Belgium	1,954
Italy	8,335
Bulgaria	1,192
Others	12,086
Total	81,926

Source: United States Pulp Producers Assn.

Swedish Wood Pulp Exports by Countries of Destination 1938

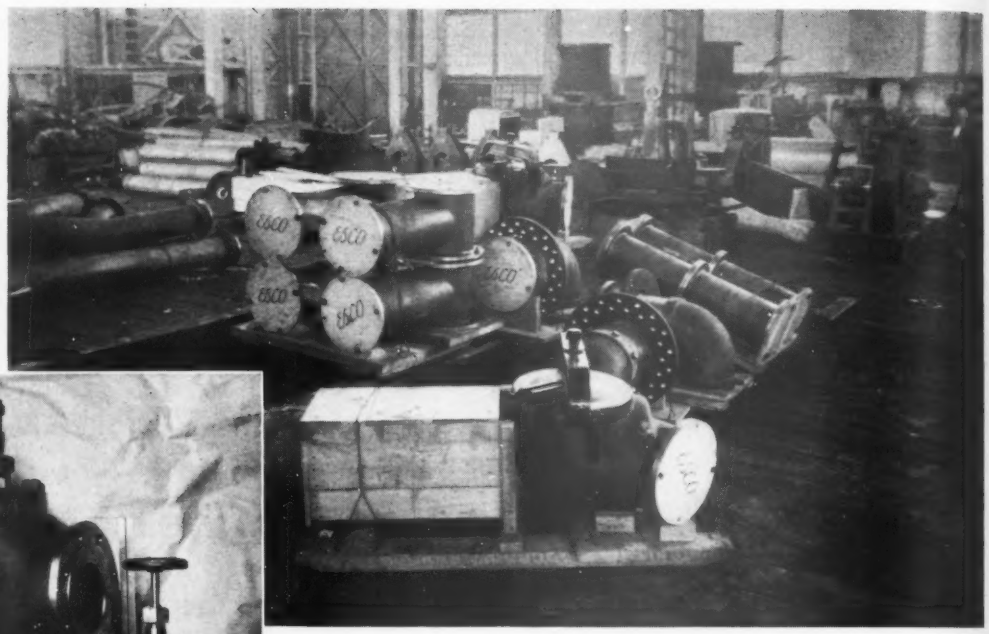
(Short Tons)

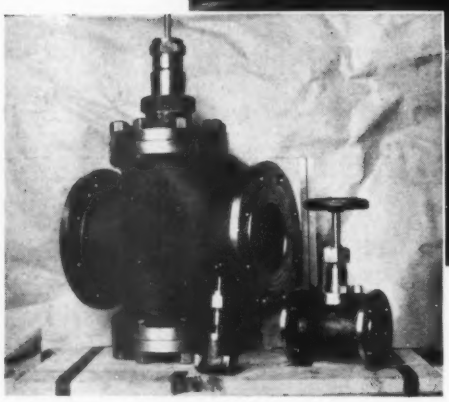
	Sulphite		Sulphate			
	Bleached	Unbleached	Bleached	Unbleached	Mechanical	Total
Stored in Norway	995	.....	.....	.....	2,069	3,064
Norway	1,171	6,205	421	4,898	2,999	15,694
Denmark	297	20,014	119	1,694	2,295	24,419
Finland	6	.....	.....	.....	.....	6
Latvia	196	.....	.....	.....	.....	196
Lithuania	671	22	.....	.....	99	792
Poland and Danzig	7,398	524	57	837	420	9,236
Germany	14,675	10,032	1,639	51,243	.....	77,589
Netherlands	13,837	15,969	3,116	13,197	8,257	54,376
Belgium	11,434	32,582	2,169	9,845	7,065	63,095
Great Britain	63,190	199,505	15,083	111,306	244,855	633,939
Northern Ireland	984	88	15	521	.....	1,606
Irish Free State	530	.....	.....	1,120	.....	1,650
France	23,042	63,421	3,752	26,140	31,191	147,546
Spain	1,310	8,228	352	5,868	1,345	17,103
Portugal	845	6,143	51	2,884	1,846	11,769
Italy	82,511	6,508	384	17,294	.....	106,697
Switzerland	3,752	190	1,698	6,134	.....	11,774
Austria	.....	.....	.....	16	.....	16
Czechoslovakia	487	49	17	162	.....	715
Rumania	.....	.....	.....	1,231	.....	1,231
Yugoslavia	.....	616	.....	425	.....	1,041
Greece	2,009	2,304	209	180	66	4,768
Bulgaria	32	627	.....	180	122	961
British South Africa	2	246	.....	562	.....	810
Port. East Africa	113	.....	.....	.....	.....	113
British East India	1,569	2,551	3	252	69	4,444
China	354	.....	.....	.....	785	1,139
Japan	15,106	818	.....	1,958	.....	17,882
Canada	.....	3,802	3,360	1,764	.....	8,926
United States	67,140	356,602	68,342	307,280	21,516	820,880
Mexico	4,839	5,267	.....	5,234	67	15,407
Cuba	.....	1,725	.....	14,362	.....	16,087
Brazil	9,596	14,618	403	9,859	1,939	36,415
Uruguay	449	298	23	800	110	1,680
Argentina	7,211	11,623	336	5,542	2,072	26,784
Chile	4,221	5,305	179	3,304	111	13,120
Peru	336	84	.....	84	.....	504
Iran	.....	.....	.....	.....	28	28
Venezuela	.....	672	560	.....	.....	1,232
Rest of South America	.....	.....	.....	560	.....	560
Australia	475	2,869	.....	25,199	28	28,561
New Zealand	112	281	.....	2,238	.....	2,631
Others	.....	1,452	.....	806	17	2,275
Total	340,895	781,240	103,386	634,979	329,371	2,188,771

Source: Table prepared by the United States Pulp Producers Association from data supplied by U. S. Bureau of Foreign & Domestic Commerce. It will be noted that the above figures do not check exactly with the tonnage given in the text which were taken from the Swedish Wood Pulp Journal and Svensk Papperstidning.

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The Swedish Wood Pulp Industry in 1938

Production declined 400,000 metric tons from 1937 levels — Exports dropped 513,000 metric tons in 1938

• The following summary of the Swedish wood pulp industry in 1938 is quoted in full from the March 31st, 1939, issue of "Svensk Pappers-tidning," published in Stockholm, Sweden:

II. The Wood pulp industry.

• "The cellulose industry has not been disturbed by labor conflicts during the past year, but the general recession in trading conditions has resulted in a heavy curtailment of the output which fell below the 1937 level by about 215,000 for sulphite cellulose, and about 185,000 tons for sulphate cellulose, or in all about 400,000 tons.

"The accompanying table shows the total production of sulphite and sulphate cellulose in Sweden during the years 1925—1938.

"Of the output in 1938, about 50,000 metric tons of bleached sulphite, 220,000 tons of unbleached sulphite and 175,000 tons of sulphate cellulose have been consumed in the home market. It is estimated that the Swedish consumption of sulphite and sulphate cellulose for paper manufacture has decreased by about 165,000 tons compared with 1937.

"In spite of the heavy curtailment of the output, the production during last year could not be fully sold. The level of stocks considerably increased towards the end of the year, both as far as sulphite and sulphate pulp are concerned; the accumulation of stocks was most pronounced for the latter quality.

"The accompanying table shows the Swedish exports of sulphite and sulphate cellulose during the years 1925—1938, according to official Swedish statistics.

• "Exports of chemical pulp fell more than 500,000 tons below the 1937 figure. Shipments to the United States decreased by about 100,000 tons of sulphite and 130,000 tons of sulphate pulp. Exports of rayon pulp to Japan declined to about 1/3 of the pre-year figure, and there have been practically no shipments of pulp for paper manufacture. The decrease in exports to Japan has amounted to about 60,000 tons of sulphite and 33,000 tons of sulphate pulp. Shipments to France fell below the pre-year figure by about 60,000 tons of sulphite and 15,000 tons of sulphate pulp. There has in fact been a more or less marked decline in exports to practically all countries except England and Italy. The total Swedish shipments of pulp to these markets reached about the same level during the past two years; the sulphate exports to England slightly declined in 1938, whereas there was a corresponding increase in sulphite shipments.

"As far as Italy is concerned, the chief exports have been rayon pulp, and shipments of pulp for paper manufacture have been very limited.

"On account of the long drawn-out civil war in Spain, our shipments to that market have been very limited; shipments of chemical pulp in 1938 amounted to only 13,000 tons, as against 66,000 tons in 1935. Practically all business made with Spain last year was fixed on compensation basis.

Sulphite Cellulose

"The European sulphite organization, the "S.P.S.", has continued its activity also in 1938. The agreement expired at the end of the year but has been temporarily prolonged until the first of July. We understand that negotiations for a continued international co-operation are going on, and it is expected that they will be terminated during the first half of this year.

"The curtailment of production fixed by the S.P.S. organization in 1938 was not considered sufficient to stabilize the market, and the three Northern countries therefore agreed—at a meeting at Helsingfors in August last year—to suspend operations at all their sulphite mills for a period of fifteen weeks during the months July 1938—June 1939, a stoppage of at least eight weeks to be carried through the end of 1938. Although the other S.P.S. members—as Germany, Austria, Czechoslovakia and Memel—did not participate in this separate agreement, their exports have also been substantially cut down.

"Although the sales volume in sulphite pulp at the beginning of 1938 was estimated at close on 85% of the calculated output, the market situation has been very unsatisfactory during the whole year.

"In view of the heavy curtailments in the paper industry in all countries, buyers have not been able to receive the whole tonnage bought for delivery in 1938, and a good deal of the quantities have been cancelled or postponed to the present year. The actual deliveries during 1938 fell about 150,000 tons below the tonnage originally contracted for the year.

"Most sales have therefore been linked up with conversions of previous business; that means that sales for delivery over 1939 and in some cases also over 1940 have been made in connection with postponements, cancellations and downward price adjustments for earlier contracts for delivery in 1938. In this way, considerable quantities have been placed for delivery in 1939, in spite of the general dullness of the market. The total sales volume for 1939 is estimated at close on 75% of the calculated reduced

•

Table 1

Wood Pulp Production in Sweden

In Metric Tons

	Sulphite cellulose		Sulphate cellulose	
	Bleached	Unbleached	All Kinds	Total
1925	109,000	853,000	332,000	1,294,000
1926	121,000	934,000	394,000	1,449,000
1927	146,000	970,000	453,000	1,569,000
1928	126,000	803,000	430,000	1,359,000
1929	183,000	1,050,000	650,000	1,883,000
1930	182,000	1,049,000	622,000	1,853,000
1931	173,000	864,000	612,000	1,649,000
1932	191,000	685,000	622,000	1,498,000
1933	229,000	953,000	770,000	2,052,000
1934	265,000	1,038,000	898,000	2,201,000
1935	310,000	1,048,000	947,000	2,305,000
1936	365,000	1,093,000	1,047,000	2,505,000
1937	466,000	1,170,000	1,154,000	2,790,000
1938 (approx.)	360,000	1,060,000	970,000	2,390,000

Table 2

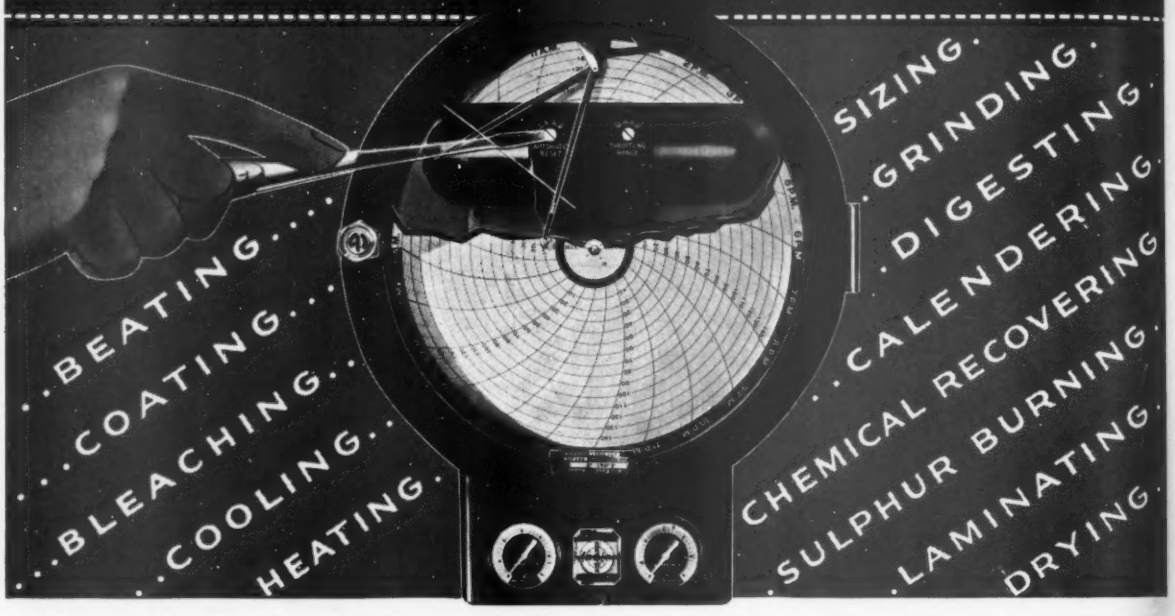
Swedish Exports of Pulp

In Metric Tons

	Sulphite cellulose		Sulphate cellulose	
	Bleached	Unbleached	All Kinds	Total
1925	82,000	646,000	248,000	977,000
1926	91,000	681,000	315,000	1,086,000
1927	115,000	744,000	348,000	1,207,000
1928	102,000	610,000	334,000	1,047,000
1929	141,000	805,000	506,000	1,452,000
1930	138,000	777,000	462,000	1,377,000
1931	151,000	637,000	513,000	1,301,000
1932	151,000	498,000	421,000	1,070,000
1933	200,000	742,000	658,000	1,600,000
1934	215,000	752,000	712,000	1,679,000
1935	268,000	763,000	758,000	1,789,000
1936	312,000	848,000	805,000	1,965,000
1937	393,000	910,000	897,000	2,200,000
1938	309,000	709,000	669,000	1,687,000

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output. It is further to be noted that the level of stocks from 1938 is abnormally high.

"The price development during the past year was very unfavorable for the sellers; since the middle of 1937 prices have declined very heavily. Due to the fact that most contracts of some importance were linked up with conversions of previous sales, it is impossible to indicate exact quotations at the end of the year.

Sulphate Cellulose

● "Also the sulphate market has been very dull during the past year; the amount of business fixed was limited and stocks were heavily rising towards the end of the year in spite of considerable curtailments of the production. In view of the increased production of sulphate pulp in several countries, prospects are very dull for the nearest future.

"Also the majority of the sulphate sales were made in conjunction with conversions of previous contracts, and new quantities for delivery in 1938 could not be sold. The total deliveries during the year were about 100,000 tons lower than the total sales volume at the beginning of 1938.

"In view of these conversions, the sales volume for 1939 has considerably increased and at the turn of the year was estimated at about 68% of the calculated output for this year.

"The sulphate prices have been declining since the general recession at the middle of 1937; the downward trend has been still more marked for sulphate pulp than for sulphite, and so far there are no signs of an improvement.

"For the same reasons as indicated above, it is impossible to give exact quotations for sulphate cellulose at the end of the year.

Mechanical Pulp

● "There have been no labor conflicts in the mechanical wood pulp industry during the past year, but the reduced sales possibilities have resulted in a certain curtailment of the output of wet pulp. Also the output of dry pulp has been considerably cut down for the same reason.

"The wet mechanical pulp market has suffered from the general downward tendency, although not to the same extent as mechanical pulp, neither in price nor in volume. Through an agreement between Sweden, Norway and Finland (the M. P.S. agreement) the output has been cut down to correspond with the actual consumption.

"Contracts closed at favorable prices during 1937 have to a large extent been converted, and prices for the new sales fixed during the year have been unsatisfactory. In the hope to obtain reasonable prices for the present year, sellers have held back and have not forced the market.

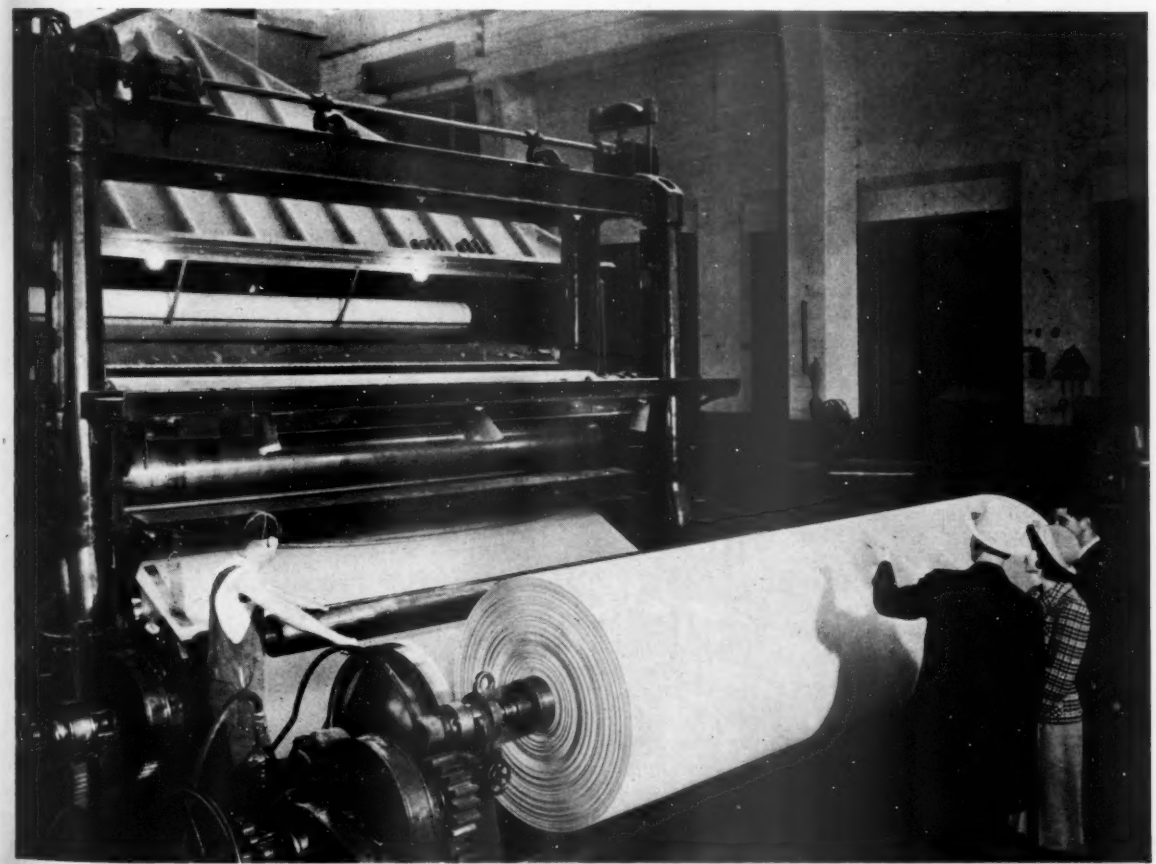
"Although stocks have increased considerably towards the end of the year, the present level is anyhow to be considered as very moderate in view of the high accumulation of stocks at the beginning of the year.

"The market for dry mechanical pulp has been very dull, the sales volume limited and prices have shown a downward trend.

"The accompanying table shows the Swedish exports of dry and wet mechanical pulp during 1925—1938 according to official Swedish statistics.

Table 3
Mechanical Pulp
In Metric Tons

	Dry Pulp	Wet Pulp
1925	47,000	328,000
1926	36,000	361,000
1927	36,000	424,000
1928	54,000	451,000
1929	59,000	555,000
1930	53,000	423,000
1931	38,000	457,000
1932	31,000	380,000
1933	42,000	545,000
1934	42,000	555,000
1935	48,000	532,000
1936	46,000	538,000
1937	54,000	598,000
1938	34,000	530,000



Courtesy of the Washington State Progress Commission

PAPER MAKING IS MAGIC to the many visitors who annually tour the paper mills of the Pacific Coast to witness the methods by which this great essential to civilization is manufactured ' ' ' Here visitors are watching the reeling of the finished sheet from one of the twelve paper machines in the Camas, Washington, specialty paper mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation.

Japan's 1938 Wood Pulp Imports Declined 73.5% From 1937 Record

United States wood pulp producers supplied 57,744 short tons or 35.8% in 1938 against 209,069 short tons or 40.3% in 1937, a decline of 151,325 short tons or 72.3%—Japanese Wood Pulp Production declined 5.4% in 1938 from the 1937 record level—Extracts from report of CARL H. BOEHRINGER, Assistant U. S. Trade Commissioner, Tokyo, Japan

WOOD pulp producers in the United States supplied 35.8 per cent or 57,744 short tons of the 161,036 short tons of all grades imported by Japan in 1938, according to the quarterly report of Assistant U. S. Trade Commissioner Carl H. Boehringer in Tokyo, recently released by the Bureau of Foreign & Domestic Commerce of the United States Department of Commerce. The value was 42,181,000 yen or $12,232,490 (on the basis of the yen value of $.29) or 56 per cent below 1937.

The American producer's share of the Japanese pulp imports was 4.5 per cent less in 1938 than in 1937 when it was 40.3 per cent of the total imports. Japan's 1938 imports of 57,744 short tons from the United States was a drop of 72.3 per cent from the 209,069 short tons imported in 1937 from U. S. producers.

Pacific Coast Shipped 76%

● Of the 57,744 short tons of wood pulp exported to Japan by American wood pulp producers in 1938, 76 per cent or 42,480 short tons was shipped by Pacific Coast pulp mills. The value was $4,183,424. It will be noted from the table that of this total 41,445 short tons valued at $4,116,404 were shipped from the Washington Customs District and 1,035 short tons valued at $67,020 were shipped from the Oregon Customs District.

In 1937 Pacific Coast pulp mills exported 82.3 per cent of the 209,069 short tons exported by United States producers or 171,903 short tons which were valued at $10,859,411.

The decline in the Pacific Coast's wood pulp exports to Japan was 129,423 short tons or 75.2 per cent. The value declined $6,675,987 or 61.4 per cent from the 1937 high.

In his report Mr. Boehringer points out that the United States has led all other pulp producing countries in supplying Japanese imports during the period from 1929 through 1938. This country's average share for the ten years has been 35.4 per cent. Canada and Sweden are tied with 19 per cent of the Japanese imports each, while Norway has supplied 16 per cent, Finland 5.4 per cent and others 4.9 per cent.

Imports From Manchuria

● "Previous quarterly reports have mentioned the increase of imports of pulp from Manchuria, a table being presented comparing arrivals from "Others," as reported in the official monthly trade return, with imports from Manchuria as reported by the Japan Paper Manufacturers Association." (The latter table is published here while the first mentioned by Mr. Boehringer is omitted as he included for checking purposes only—Editor).

On the basis of this table, included in Mr. Boehringer's report, Manchuria shipped a total of 18,868 short tons of chemical wood pulp to Japan Proper in the last ten months of 1938. Of this total 4,908 short tons were chemical pulp for paper manufacturing and 13,960 short tons were chemical pulp of rayon grade. No other grades were shipped from Manchuria. Prior to March of 1938 the reports of the Japan Paper Manufacturers' Association did not segregate imports from Manchuria from "Others" and for that reason only rough estimates of Manchuria's contribution could be made.

Mr. Boehringer goes on to say, "As indicated in our last report, it is freely expected that every effort will be made during 1939 to increase shipments from Manchuria to Japan in view of the continued drastic restrictions over imports of pulp from foreign countries.

Japanese Pulp Exports

● "During the entire year of 1938 exports of wood pulp from Japan amounted to but 2,646 pounds compared with 5,811,070 pounds in 1937."

JAPAN'S 1938 WOOD PULP PRODUCTION

● In his report Mr. Boehringer states that the total wood pulp production in Japan proper and in Karafuto (Japanese Saghalien) but excluding output in the colonies, amounted to 785,919 short tons or 5.4 per cent less than the record high production of 831,189 short tons in 1937. Of the 785,919 short tons produced 388,342 short tons was chemical pulp and 397,577 short tons was mechanical.

The 1938 pulp production was 5.5 per cent greater than the 1936 output.

"During the years 1935 to 1937 inclusive, wood pulp production by members of the Japan Paper Manufacturers' Association," states Mr. Boehringer, "accounted for about 83 per cent of the entire production in the Japanese Empire, including output by companies not affiliated with the association and output in Chosen (Korea) and Taiwan (Formosa) but excluding output in Manchuria. One of the accompanying tables summarizes output as reported by the association during the years 1935 to 1938 inclusive compared with data covering total output as reported by the Department of Agriculture and Forestry for the years 1935 to 1937 inclusive as well as an estimate for total output in 1938 based on the assumption that output by the associated companies again represented about 83 per cent of the empire's total production." (second table)

Mr. Boehringer goes on to say, "It will be noted that the foregoing

estimate (Japanese Empire table) of 939,655 short tons for complete production of wood pulp during 1938 in all parts of the Japanese Empire (exclusive of the output of Manchuria) is appreciably below the official estimate of 1,121,375 short tons announced by the Department of Agriculture and Forestry during the summer of 1938. It is possible that output by companies not affiliated with the Japan Paper Manufacturers' Association gained relatively more than did the output of the associated companies. The final figures for 1938, however, will not be available until the summer of 1939."

Pulp Prices in Japan

• Prices for both domestic and imported pulp in Japan are given in the tables accompanying this article. Mr. Boehringer states in his report:

"According to a report released on February 16, 1939, by the "Japan Weekly Chronicle," Kobe, the Rayon Pulp Adjustment Association is now urging the Oji Paper Manufacturing Company, leading pulp producer in the Japanese Empire, and other pulp companies to reduce their prices in order to assist rayon and staple fiber manufacturers to cut down their costs.

"While pulp quotations abroad have been declining, it is pointed out, the domestic prices have been ruling very high due to restricted supplies. Imported rayon pulp costs about $80 per ton or 13 sen per pound in Japanese currency. On the other hand, the Oji Paper Manufacturing Company charges 17 sen and both the Hokuetsu Paper and the Japan Soda companies from 17 to 18.5 sen. The association is now asking the Oji Paper Company to reduce its price to 15 sen. It is also urging the other two companies to reduce their quotations to the same figure on the condition that they will sign collective contracts in the future.

Import Quotas for Wood Pulp

• "Final decision to allow importation of the 58,000 metric tons of rayon pulp covered by import permits granted in the spring of 1938 was given during the period under review by the Finance Ministry. Shipments from supplying countries were scheduled to be made in November and December to arrive here in January, February and March, 1939. Of the total of 58,000 tons, 25,100 tons were to be received from the United States West Coast and 2,000 tons from the United States East Coast, the allotment from the United States being 27,100 tons or 46.4 per cent of the total import quota. Presumably small amounts of Canadian pulp are included in the quota for the United States. The balance of 30,900 tons was scheduled to be received from European suppliers.

"Arrival of some of this pulp occurred during December, this accounting for the increase in total imports compared with November. Further supplies are due during the first quarter of 1939. It will be remembered that imports from Manchuria are not included in this or any subsequent quotas likely to be fixed.

"Acording to a trade report of the 58,000 tons, 27,000 tons are to be delivered to manufacturers of export products and 31,000 tons to manufacturers catering to the domestic market.

"Concerning further rayon pulp imports during 1939, a number of widely differing reports are available. Although these reports dicer as regards figures, they agree on the point that further imports will be severely curtailed and possibly entirely prohibited. In this connection it appears desirable to quote several typical reports which have appeared on the subject in recent months. The "Japan Advertisers," Tokyo, on December 13, 1938, reported that rayon pulp imports in 1939 are expected to reach 170,000 tons, including the 58,000 tons now being received, according to estimates of the Rayon Pulp Control Association of Osaka, the Tokyo daily quoting a report released by Domei, the official Japanese news agency. The supply and demand position for rayon pulp was given as follows by the association.

Supply	Metric Tons
Probable amount on hand Dec. 31, 1938	60,000
To be imported under special permits	58,000
Domestic production for 1939	190,000
Total	308,000
Demand	
For rayon and staple fiber industries	84,000
Necessary permanent excess on hand	338,000
Total	420,000
Imports to be specially requested to cover deficit	112,000

"Whether the estimated additional imports of 112,000 tons can be decreased depends on the domestic production. In this connection, the Commerce and Industry Ministry estimated 1939 domestic output at 230,000 tons, more by 40,000 tons than the association anticipates. It is obvious that this estimate includes output of all Japanese mills, including those in Manchuria.

"On December 15, 1938, the "Japan Weekly Chronicle," Kobe, reported that Japan will have to import about 100,000 tons of rayon pulp in 1939 in addition to the 58,000 tons now being received, according to a revised demand and supply estimate submitted by the Rayon Pulp Control Association for the first quarter of 1939. Herewith the balance of this report:

" 'During the first three month Japan will be able to produce 38,000 tons. Imports are likely to reach 25,000 tons in January and 16,000 tons in February and March. As it is expected that about 50,000 tons will be carried forward, the total supply will in all probability reach 146,000 tons. On the other hand, assuming the monthly consumption of 28,000 tons, the demand will be approximately 84,000 tons. Thus there will be a balance equivalent to two months' needs.

" 'Based on the above estimate and on the assumption that there will not be any drop in consumption, the Association thinks that it will be necessary to import approximately 100,000 tons additionally.

" 'The Department of Commerce and

•

SUMMARY-JAPANESE IMPORTS OF WOOD PULP 1928-1938

Short Tons

Year	U.S.A.	Sweden	Norway	Canada	Finland	Others	Total
1928	16,107	7,297	7,820	32.895	.....	17,899	82,048
1929	16,195	10,413	16,034	38,935	.....	8,609	90,199
1930	6,200	6,844	18,750	48,989	.....	7,953	88,736
1931	22,518	20,348	11,531	54,941	.....	8,649	112,985
1932	24,804	18,057	24,220	30,183	.....	16,219	113,483
1933	50,042	29,130	34,934	52,238	.....	13,104	179,449
1934	93,760	53,048	44,342	45,051	.....	16,544	252,746
1935	122,315	56,745	54,416	38,545	28,018	2,740	302,780
1936	172,493	63,089	62,584	31,133	34,684	2,320	362,802
1937	209,069	136,528	68,729	58,265	42,314	8,636	523,541
1938	57,744	27,831	20,322	18,801	14,016	22,372	161,036

From a report by the U. S. Bureau of Foreign and Domestic Commerce. Data from Japanere Department of Finance.

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Industry estimates domestic production next year at 230,000 tons, but the Association thinks that it will be only approximately 185,000 tons. Should domestic production be larger, as predicted by the Commerce Department, imports will automatically decrease.

"Still another attempt to estimate the supply and demand position for rayon pulp was made by the "Nippon Kogyo Shimbun" (Japan Industrial News), Osaka, on December 22, 1938. For the sake of completeness, this report is presented herewith in full:

" 'The treatment of imported pulp is considered to be a cardinal issue in connection with the adjustment of supply-demand of rayon pulp in 1938. According to the latest estimate, the production and demand of rayon pulp next year are believed to be as follows:

SUPPLY: Domestic Production	Metric Tons
Oji Paper Manufacturing Company	59,000
Japan Rayon Pulp Company	40,000
North Chosen Paper & Chem. Ind. Co.	27,000
Sanyo Pulp Industrial Company	15,000
Hokuetsu Pulp Company	20,000
Nisso Rayon Pulp Company	20,000
Japan Pulp Industrial Company	20,000
Total Domestic Production	201,600
Manchurian Production	
Nichiman Pulp Company	10,000
Toho Pulp Industrial Co.	10,000
Manchurian Pulp Industrial Co.	5,300
Toyo Pulp Industrial Co.	7,000
Kangte Reed Pulp Industrial Co.	5,300
Manchurian Soya Bean Husk Pulp Co.	6,000
Total Manchurian Production	43,600
GRAND TOTAL OF PRODUCTION	**245,200**
DEMAND	
Demand by rayon industry	147,000
Demand by staple fiber industry	210,000
Demand by cellophane industry	8,000
Total Demand	365,000

"On the basis of the preceding figures, the 1935 supply will prove short of demand by 61,000 metric tons even when making use of the 58,000 metric tons already licensed by the Government to be imported in January-March. The experts of the Ministry of Commerce and Industry are deliberating upon measures for the adjustment of the supply demand balance.

"As previously indicated, considerable dicerence of opinion exists with regard to 1939 production of rayon pulp in the Japanese Empire and in Manchuria. The Department of Commerce and Industry is inclined to make very liberal estimates, ranging from 230,000 to 245,000 metric tons in contrast with estimates of the Rayon pulp Control Association and other interested parties ranging from 160,000 to 190,000 tons.

• "Effective March 1, 1939, the rayon pulp-rayon import-export link system was put into effect, in accordance with which a specific amount of rayon pulp will be allowed importation against a definite amount of rayon yarn or rayon cloth exported. Press reports indicate that the Government is seriously considering the matter of allowing future imports of rayon pulp to be made only under the link system. Typical report of this sort is the following released on January 20, 1939, by the "Nikkan Kogyo Shimbun" (Daily Industrial News), of Osaka:

" 'The Ministry of Commerce and Industry has been negotiating with other Government offices concerned in connection with the commodity adjustment plan. Relating to the supply-demand of rayon pulp however, the ministry unofficially has decided not to license the imports of rayon pulp during the 1939-40 fiscal year (commencing April 1, 1939), although it intends to permit the imports of the linking system to supplement the domestic supply. As the result, the 1939-40 production of rayon and staple fiber is expected to be reduced by almost 20 per cent from that in 1938-39. In 1938-39 the domestic consumption of rayon pulp totalled 320,000 metric tons.

" 'According to the supply scheme involved in the 1939-40 commodity mobilization plan, the total supply for the year is estimated at 260,000 tons inclusive of about 260,000 metric tons scheduled to be produced in Japan and "Manchukuo" and the possible imports of about 60,000 metric tons to be imported under the link system.

" 'Thus the rayon pulp supply in the 1939-40 fiscal year is believed to drop by about 60,000 metric tons compared with the 1938-39 fiscal year. According to the present plan of the Government experts, the supply to both the rayon and the staple fiber industry will be cut by about 10 per cent under the circumstances, thus compelling the two industries to reduce their production by about 20 per cent.'

"The 'Nippon Kogyo Shimbun,' on

●

IMPORTS OF PAPER AND RAYON PULP INTO JAPAN*
1937-1938

Short Tons

From:	Paper Pulp 1937	Paper Pulp 1938	Rayon Pulp 1937	Rayon Pulp 1938	Total Pulp 1937	Total Pulp 1938
Great Britain	6	(1)	173	.....	179	.....
France	171	.....	.....	.....	171	.....
U. S. A.	56,338	10,046	156,036	48,108	212,374	58,154
Canada	35,518	654	23,108	18,298	58,626	18,962
Finland	5,861	2,510	36,790	11,618	42,651	14,127
Sweden	93,030	14,509	44,343	13,544	137,373	28,053
Norway	7,493	507	62,667	20,482	70,160	20,989
Czechoslovakia	85	.....	4,702	569	4,787	569
Italy	.....	.....	114	1	114	1
Manchuria	.....	4,908	.....	14,236	.....	19,144
Other Countries	290	164	55	1,939	345	2,103
Totals	198,792	33,298	327,988	128,795	526,780	162,102

*As reported by Japan Paper Manufacturers' Association in its monthly trade journal. The differences between these totals and the official import figures are due to the practice of the association in employing a conversion factor slightly higher than the officially accepted rate of 132.2772 pounds equal to 100 kin (a Japanese measure of weight).

From reports by the U. S. Bureau of Foreign & Domestic Commerce.

(1) Less than 500 pounds.

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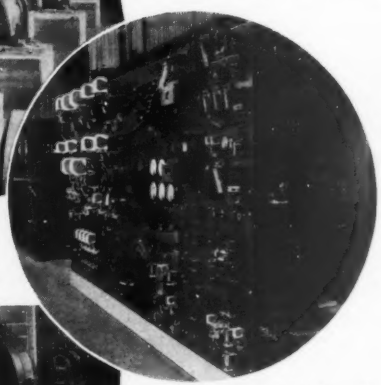
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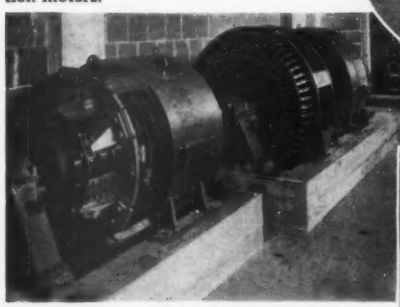
J 93828



Sectional drive automatic control, with one of the distribution centers in background.



Power house for plant and saw mill, with main turbine generators and switchboard.

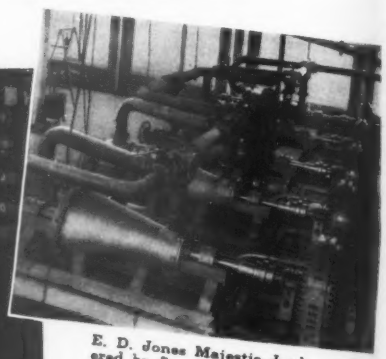


Sectional paper machine drive motor generator set, with coupled braking generator. Also master set, exciter set, and winder motor generator set.

DJ Murray Chipper, run by Westinghouse synchronous motor.



Sectional paper drive machine, from driving side, from calenders toward wet end of machine.



E. D. Jones Majestic Jordans, powered by five Westinghouse synchronous motors.



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February 3, 1939, carried an article under the arresting title of 'Imports of Rayon Pulp Not to be allowed as a Principle.' In view of the importance of the subject, this article is presented herewith in full:

"'With the Ministry of Commerce and Industry, the Ministry of Finance and the Government Planning Board deliberating upon the import plan of rayon pulp for the 1939-40 fiscal year under the commodity mobilization scheme, it is believed that the imports of rayon pulp in 1939-40 are likely to be greatly restricted, and the supply-demand situation will grow further stringent.

"'Of the 58,000 metric tons of rayon pulp licensed by the government for January, February and March of this year, 27,000 tons are to be delivered to the manufacturers of export products and the remaining 31,000 tons will be devoted to domestic use. Domestic production in 1939-40 is believed to amount to 200,000 metric tons at best or 180,000 tons by the most conservative estimate.

"'Under the circumstances, the 1939-40 supply is expected to amount to 250,000 metric tons, inclusive of 31,000 metric tons available by imports, at best, or 210,000 metric tons in the worst case. Thus the supply for the year will be extremely restricted. The Government experts expect that the export manufacturers will have their shares relating to the additional supply of material pulp by the link system and the domestic production will increase more or less during the year. For these reasons, the Government is likely to adopt a policy not to license further imports of rayon during 1939-40 as a principle.'

Further Control Over Domestic Pulp Industry

● "The Ministry of Commerce and Industry is steadily strengthening its control over the domestic pulp industry, according to a trade report released on February 17, 1939. The fundamental pulp policy of the ministry is reported to be as follows:

1. "No new or expansion projects for wood pulp manufacture shall be licensed in the future, whether for rayon or paper pulp.

2. "No supplementary pulp projects shall be licensed under any circumstances.

3. "Pulp projects already licensed by the Government will be urged to materialize as soon as possible. If the projects should be found impossible of realization, the licenses for investment already issued shall be cancelled.

"Thus, it is pointed out, projects providing for establishment of new enterprises and expansion of existing ones will be completely prohibited by the Government in the future with the exception of the Second National Policy Company, now being organized, and the production increase schemes of the First National Policy Pulp Company.

Development of National Pulp Policy

● "Previous reports have given details concerning the formation of the Kokusaku Pulp Kogyo Kaisha, or the National Policy Pulp Industry Company, a semi-official company organized to help the Government carry its drive for pulp self-sufficiency. Early in December, 1938, reports appeared in the trade press indicating that the formation of a second company of the same nature was se-

WOOD PULP EXPORTS TO JAPAN FROM U. S. PACIFIC COAST PORTS—1938

Customs District.	Unbleached Sulphite		Bleached Sulphite		Other		Total	
	Short Tons	Value	Short Tons	Value	Short Tons	Value	Short Tons	Value
Washington	.....	.....	41,203	$4,105,539	242	$10,865	41,445	$4,116,404
Oregon	1,035	$67,020	.....	.....	.....	.....	1,035	67,020
Total	1,035	$67,020	41,202	$4,105,539	242	$10,865	42,480	$4,183,424

Source: U. S. Customs Service.

IMPORTS OF WOOD PULP INTO JAPAN FROM MANCHURIA*

(Volume in pounds — value in yen)

1938	Chemical Rayon Pulp		Chemical Paper Pulp	
	Volume	Value	Volume	Value
March	.....	.....	115,200	¥19,992
April	116,133	¥116,005	1,444,799	200,601
May	2,213,600	388,519	64,669	8,982
June	1,644,133	293,586	.....	.....
July	2,983,734	523,234	1,033,067	155,323
August	3,288,533	550,621	3,600	275
September	4,467,867	777,565	1,770,000	218,776
October	2,868,800	480,529	322,800	40,017
November	3,850,933	643,853	2,234,133	280,835
December	6,485,067	1,122,365	2,827,734	351,180
Totals (10 months)	27,918,800 lbs.	¥4,896,277	9,816,000 lbs.	¥1,275,981

*Imports of wood pulp from Manchuria into Japan Proper were not reported separately prior to March, 1938. The above figures are from the reports of the Japan Paper Manufacturers' Association.

From a report of the U. S. Bureau of Foreign & Domestic Commece.

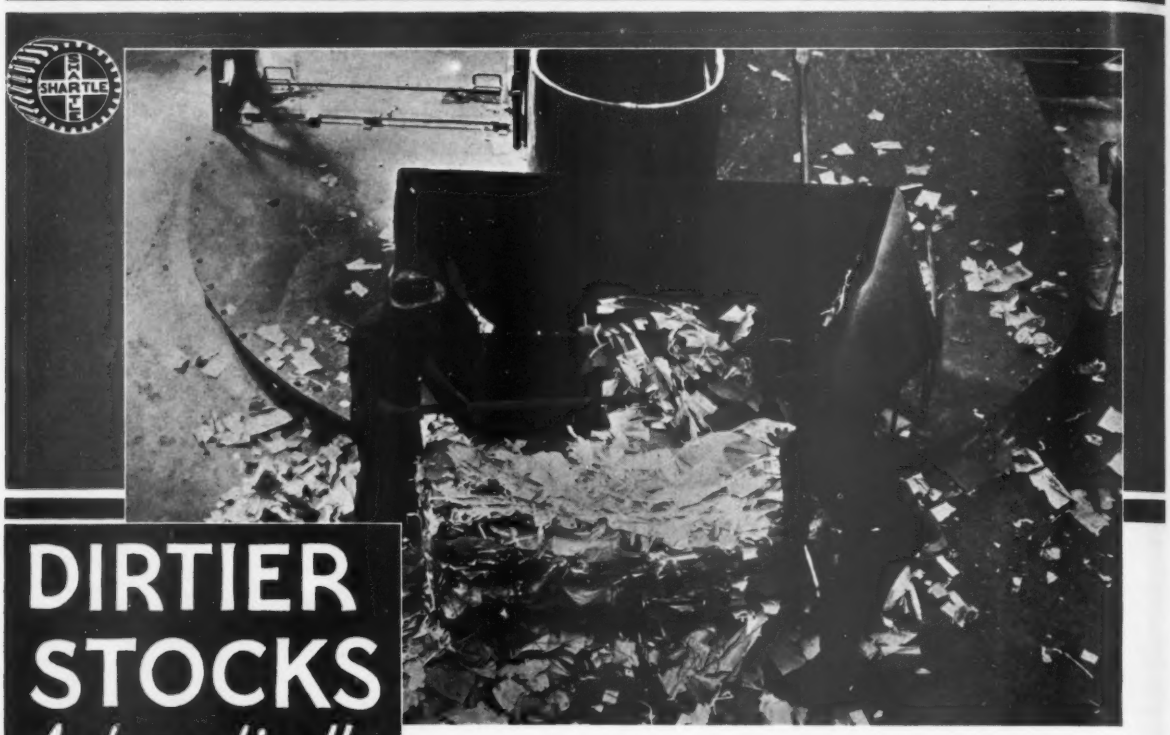
JAPANESE EMPIRE WOOD PULP PRODUCTION*

1935-1938

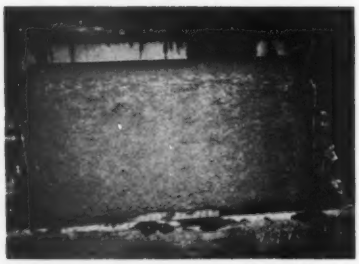
Short Tons

	Mechanical	Chemical				Total
		Sulphite	Kraft	Magnesia	Rayon	
1935	359,554	401,776	45,365	4,230	37,447	848,372
1936	374,138	400,301	58,036	4,562	61,834	898,871
1937	412,970	440,240	71,098	4,935	64,169	933,412
1938	.....	.....	.....	.....	.....	939,655

*Total production for all companies as reported by Department of Agriculture and Forestry; total for 1938 estimated on basis of assumption that the associated companies again accountned for about 83 per cent of the total output. From report of the U. S. Bureau of Foreign & Domestic Commerce.



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Above is step one . . . charging the breaker. At left is a view showing cleaned stock leaving the thickeners. Get the details on this complete system by writing (without obligation) to Shartle Brothers, Middletown, Ohio. Division of the Black-Clawson Company.

SHARTLE BROTHERS

riously being considered. Representative of these reports is the following news item released on December 3, 1938, by the 'Nippon Kogyo Shimbun.'

"'Preparations for the establishment of a pulp company, planned to be named the Second National Policy Industrial Company, are now secretely being made by the paper concerns, except Oji Paper, which failed to participate in the organization of the National Policy Pulp Company for reasons relating to share allotment quotas, etc. Although the details of the projected company are not yet definitely known, the new company is believed to be created as follows:

"'1. **Name**—Second National Policy Pulp Industrial Company.

"'2. **Capitalization**—Yen 20,000,000, one-quarter paid up by first installment payment.

"'3. **Investments**—To be made by member companies of the Japan Paper Manufacturers' Association (except Oji Paper) and the National Policy Pulp Company.

"'4. **Planned capacity**—50,000 metric tons of paper pulp annually.

"'5. **Plant**—To be erected in Hokkaido.

"'The movement of the paper companies after the severence of their relations with the National Policy Pulp Company has been closely watched in the pulp circles with special reference to the rumored establishment of an independent pulp concern. In this connection, the adjustment of relations with the National Policy Pulp Company and the Government's attitude are regarded as the two deciding factors for the present issue.'

"In another report released by the 'Nippon Kogyo Shimbun' on December 3, 1938, it was stated that the financial investments in the Second National Policy Pulp Company will be divided among the three major groups, the National Policy Pulp Company, the Mitsubishi Paper Company and the other paper companies. Of the total of 400,000 shares involving Yen 20,000,000, the National Policy Pulp Company will underwrite to the limit of one-quarter, namely, 100 shares involving Yen 5,000,000. Of the remaining 300,000 shares amounting to Yen 15,000,000 the Mitsubishi Paper Company will take 50 per cent or 150,000 shares worth Yen 7,500,000. Other paper companies will accept 150,000 shares valued at Yen 7,500,000, on the basis of the respective productive capacities. It was added that the National Policy Pulp Company will participate in the new company in anticipation of the possible merger of the two national policy companies in the future. Before such a merger takes place, however, the Mitsubishi Paper Company will occupy a dominant position in the new concern and the Osaka paper predicted that the new pulp company will be placed under exclusive technical management of the Mitsubishi subsidiary.

"The latest report concerning the projected formation of the Second National Policy Pulp Company was released on January 11, 1939, by the 'Nippon Kogyo Shimbun,' which indicated that the formation of the company was now bitterly opposed by the First National Policy Pulp Company. The existing company complained that the creation of the second concern is not advisable from the standpoint of unification of the national pulp policy. It pointed out that the paper companies failed to participate in the formation of the first company despite invitations to invest and that it is still willing to permit the paper companies to become financially interested in the first company. The report concluded with the observation to the effect that the Ministry of Commerce and Industry considers the complaints justified and is 'racking its brains to reach a fair judgment.' The matter apparently continues to be deadlocked.

JAPANESE WOOD PULP PRODUCTION*
1935, 1936, 1937 and 1938
Short Tons

	Chemical	Mechanical	Total
1935	367,558	342,530	710,088
1936	384,615	359,988	744,603
1937	444,039	387,150	831,189
1938	388,342	397,577	785,919

*Includes output in Japan Proper, Hokkaido and Karafuto (Japanese Saghalien). From report by the U. S. Bureau of Foreign & Domestic Commerce.

New Companies, New Mills, Plant Extensions, Etc.—Japan Proper

● "Apparently in response to the Government's decision to exert strict control over the formation of new companies and the extension concerns, remarkably few reports are available on this subject.

"The production increase plan of the Asahi Electro-Chemical Company, at its Oku plant, involving a daily production of 50 metric tons of straw pulp, was expected to materialize early in December, a trade report on November 15, 1938, indicated. Productive capacity at that time was 20 metric tons a day. Some doubt was expressed over the fact that the Government might not license the increase in productive capacity.

"The Taiyo Pulp Company early in January, 1939, decided to apply to the Bank of Japan for permission to triple its capitalization to Yen 3,000,000 to raise funds necessary for erecting a rayon pulp plant with capacity of 10 metric tons a day. Timber to be supplied by the Ministry of Agriculture and Forestry was mentioned as being the raw material for this project. Arrangements for this already have been made. It was reported that since this concern is familiar with pulp manufacture, having specialized heretofore in manufacture of paper pulp, it was considered likely that the Government would give permission to increase the capitalization.

"The straw pulp plant of the Rata Pulp Industrial Company, now under construction, is scheduled to start test operations by June, this year, at the latest since the plant itself is nearly completed and machinery is now being installed. An annual output of 6,000 metric tons of paper pulp is involved in the first-stage schedule of operations. A new pulp plant under construction by the Takasaki Paper Board Company for the production of kraft pulp was nearly completed early in December and was scheduled to be ready for operation by this spring at the latest. The plant will use red pine available in Japan as raw material. The new plant, equipped with annual capacity of 10,000 metric tons, cost Yen 1,900,000, paid out of funds raised by calling in unpaid shares.

"The Harima Dockyard recently succeeded in making paper pulp by utilization of scobs and waste paper available in the dockyard in the course of shipbuilding activities, according to a trade report released on February 23, 1939. Encouraged by its success, the company decided to erect a pulp plant within the premises of the dockyard and applied for official permission.

New Companies, New Mills, Plant Extensions—Taiwan (Formosa)

"The Taiwan Pulp Industry Co., Ltd., of Tsichu, Taiwan, which was organized in February, 1938, by the Dai Nippon Sugar Manufacturing Company and other concerns, is expected shortly to complete construction of its factory near Taichu and to commence manufacturing paper pulp at the rate of 15,000 tons a year, according to a trade report released on November 24, 1938. It was stated that operations were expected to start in February, 1939. The company is capitalized at Yen 10,000,000, half paid in.

New Companies, New Mills, Plant Extension, Etc.—Manchuria

● Previous reports have mentioned plans for development of the wood pulp resources of the Hsingan Mountain range in Manchuria. A Manchurian national policy pulp policy company was proposed, while at the same time last fall three combines of Japanese capitalists proposed separate plans to produce wood pulp in the area. The latest report available was released on November 20, 1938, by the Japan Advertiser, Tokyo, quoting a report from the vernacular Tokyo Daily, the "Chugai Shimbun." According to this source a firm known as the Kokusri Pulp Company will be established in Manchuria under joint investment of the Konigafuchi Spinning Company, the Oji Paper Manufacturing Company and the National Policy Pulp Company. The proposed company expected to speed the Japan-Manchuria rayon pulp self-sufficiency plan, it was asserted. It is to be capitalized at Yen 60,000,000, half invested by the Government of "Manchukuo" and half by the above mentioned three companies. Objective of the proposed company is the annual production of 230,000 metric tons of rayon pulp. Presumably the forest resources in the Hsingan ranges will be utilized."

The Pacific Coast Industry Produces a Variety of Products

The manufacture of converted paper products is expanding year by year—A list of the pulp and paper products manufactured by Pacific Coast plants is presented below

A

THE ADHESIVE PRODUCTS CO., INC.

San Francisco

Gum Sealing Tape
Bookbinders' Gummed Hollands
Stay Tape
Veneer Tapes
Corrugated Box Tapes
Industrial Adhesives

●

ANGELUS PAPER EXCELSIOR PRODUCTS CO.

Los Angeles

Products

Adding Machine Paper
Cash Register Paper
Tabulator and Teletype Paper
Addressing and Listing Papers
Ticker Tape
Serpentine
Other Roll Paper Specialties
Paper and Wood Excelsior
Paper and Wood Furniture Pads
Embossed Chip Board
Pipe and Tire Wraps

B

BARTRAM PAPER PRODUCTS CO., LTD.

Vancouver, B. C.

Products

Bag Specialties
Candy Bags
Cellophane Bags
Coffee Bags
Garment Containers
Glassine Bags
Greaseproof Specialties
Grocery Bags
Laundry Bags
Millinery Bags
Shopping Bags
Notion Bags

●

BATES VALVE BAG CORPORATION

Converting Plants at Seattle, Washington; Emeryville and Los Angeles, California

Products

Multi-wall Paper Valve Bags
Multi-wall Paper Bags (open-mouth)
Cement, Lime and Plaster Bags, etc.
Sugar and Flour Bags
Chemical Bags
Moisture-proof Bags, etc.
Valve Bag Filling Machines, Open-Mouth Bag Closing Machines and Automatic Scales

J. E. BERKHEIMER MFG. CO.

Tacoma, Wash.

Products

Saturating Felt
Building Paper
Deadening Felt
Chip and Straw Board
Roofing materials
Composition shingles
Asphalt

●

BRITISH COLUMBIA PULP & PAPER CO., LTD.

Office, Vancouver, B. C.
Mills, Port Alice and Woodfibre, B. C.

Products

Bleached Sulphite Pulp
Wood Cellulose for Cellophane and Rayon Manufacture
Refined Sulphite Screenings

●

BROWN PAPER GOODS CO.

Los Angeles and Oakland

Products

Glassine Bags
White Laid Candy Bags
Paper Napkins
Cocktail Napkins

C

CALIFORNIA CONTAINER CORP.

Emeryville, Calif.
Los Angeles, Calif.
Portland, Oregon

Products

Corrugated Egg Cases
Corrugated Fibre Cannery Cases
Corrugated Shipping Containers
Fruit and Vegetable Containers
Dried Fruit Cases
Fruit Pads

●

CALIFORNIA FRUIT WRAPPING MILLS, INC.

Pomona, Calif.

Products

Citrus Fruit Wraps—
Treated and untreated, printed and unprinted, one or two colors, basis weight 10 lbs., M. G. and M. F.
Deciduous Wraps—(Fruit & Vegetable)
Oiled and unoiled, printed and unprinted, copperized, basis weight 10 lbs. and heavier.
Napkins, plain.
Department Store Tissue, flat or quirefolded, 10 lbs. and heavier.
Laundry Tissue, flat or quirefolded, M. G.
Bottle Wraps, printed and unprinted, basis weight 10 lbs. and heavier

Brands

"Pomona Brand" only
Plant Protectors (Sage Hi-Caps)
"Protecto" Toilet Seat Covers
Waxing Tissue and other tissue specialties

●

CALIFORNIA-OREGON PAPER MILLS

Los Angeles, Calif.

Products

Wrappings—
Manila, kraft and sulphite
Tissues—
White and colored
Fruit Wraps—
Oiled, plain and printed
Waxing Papers—
Plain and printed
Vegetable Parchment
Specialties

●

CAPITAL ENVELOPE CO., LTD.

Los Angeles

Products

Envelopes, commercial and special
Glassine Bags, plain and printed

●

CARPENTER ENVELOPE COMPANY

Division of Carpenter Paper Co.
Los Angeles

Manufacturers

Products

Complete line of Envelopes
Drinking Cups

●

CENTRAL FIBRE PRODUCTS CO.

(Formerly Colorado Paper Products Co.)
Denver, Colo.

Products

Manila Vat-lined Box Boards
Book Vat-lined
News Vat-lined
Test Liner
Test Chip
Pasted Chip
Container Stocks
Sheathing
White Blanks
Colored Folding Box Boards
Set Up Box Boards
Plain Chip, Rolls and Sheets
Pulp Wall Boards

CERTAIN-TEED PRODUCTS CORP.
Richmond, Calif.

Products

Roofings—
- Mineral Surfaced Shingles
- Mineral Surfaced Roll Roofings
- Smooth Surfaced Roll Roofings

Felts and Building Papers—
- Asphalt felt, 15, 20 and 30 lb.
- Asphalt sheathing
- Tuftite Kraft Sheathing
- Blue pasterboard, 30 and 60 lb.
- Deadening felt, ¾, 1 and 1½ lb.
- Sheathing paper, 20 and 30 lb.
- Asbestos—cement siding
- Unsaturated felt and building papers

Lining Felt—
- Brands

Shingles—
- 15" Thick Butt
- 12" Thick Butt
- Cut-Out
- Waverly
- Hexagonal
- Universal
- Mul-T-Form
- Individuals
- Dutch Lap
- Saf-T-Lok, French Lock
- Certain-teed, Beaver Vulcanite

Roll Roofing—
- Diamond Point, Blockedge
- Split Sheet, Super Certain-teed
- Certain-teed, Guard
- Certain-teed Structural Insulation Board
- Certain-teed Hard Board
- Densewood Products
- Genuine Beaver Board
- Bestwall Plaster Board

CHASE BAG CO.
Portland, Ore.

Products

- Burlap Bags
- Cotton Bags
- "Saxolin" Open Mesh Paper Bags
- Crinkled Paper Bags and Barrel Liners

●

CLARKSBURG PAPER CO.
Oakland, Calif.

Products

- Boxes—Shipping, Corugated, Fibre

●

COAST ENVELOPE AND LEATHER PRODUCTS CO.
Los Angeles

Products

- Envelopes
- Book Covers
- Leather Goods

●

COLUMBIA RIVER PAPER MILLS
Vancouver, Wash.

Products

- Wrappings—
  - Bleached and Unbleached butcher and wrapping paper
- Newsprint
- Fruit Wraps—
  - Citrus and deciduous, oiled, plain or printed
- Toilet Tissues
- Bleached Specialties
- Sulphite Bonds
- Envelope
- Writings

CONTINENTAL BAG SPECIALTIES CORP. and ONEIDA PAPER PRODUCTS, INC.
Los Angeles

- Cellophane Bags—
  - Flat
  - Square
  - Satchel Bottom (FUL-LOK)
- Cellophane Envelopes—
- Coffee Bags, Flavo Fresh
- Glassine Bags—
  - Flat
  - Square
- Glassine Envelopes, Open End
- Ice Cream Bags
- Window Bags—
  - Self-Opening with full-length (strip) window
  - Self-Opening with die-cut window
  - Flat & Square—
    - Full-face window
    - Partial face (strip) window
- Waxed Bags—
  - One Side
  - Two Sides
  - Pre-printed
- Catalog Envelopes, Open End
- Kraft Bags, Miscellaneous except Grocery
  - Flat
  - Square
- Sta-Fresh Sandwich Bags (For consumer re-sale)

●

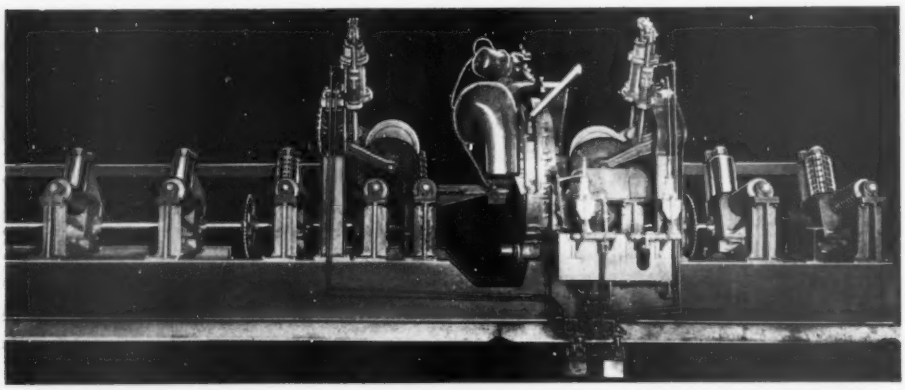
COOS BAY PULP CORPORATION
Empire, Oregon

- Unbleached Sulphite Pulp



THE SIGHT OF A "BLUE BOOK" sends chills up and down the spines of most high school and college students ✓ ✓ ✓ The large converting plant of the Everett Pulp & Paper Company at Everett, Washington, produces school and office supplies in great quantity and variety, including thousands of blue books ✓ ✓ ✓ The notebooks, office forms and other converted products are made from Everett's own paper.

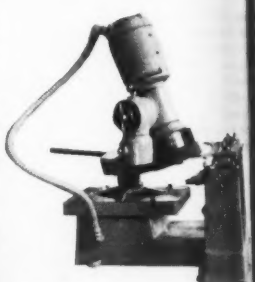
STETSON-ROSS *100% motorized*



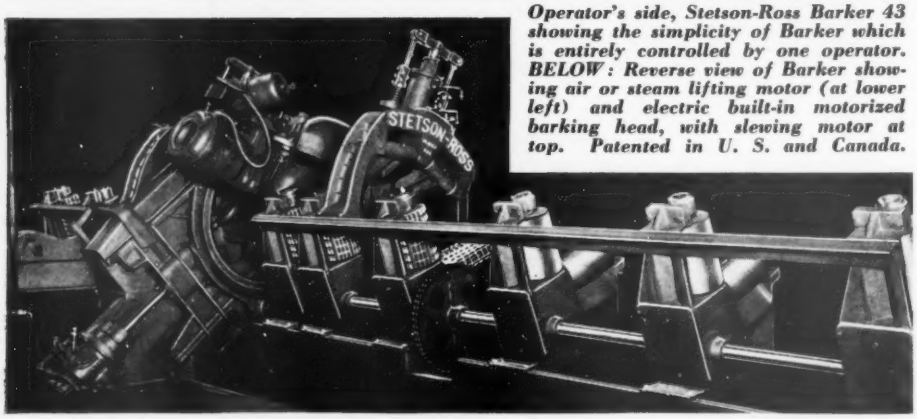
BARKERS



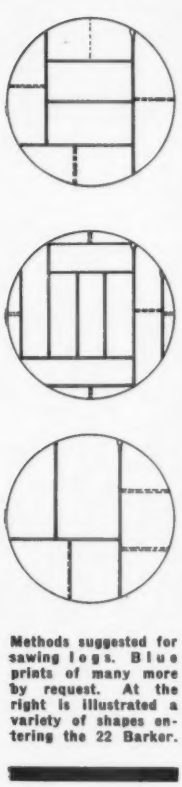
SB-2 HAND BARKER
Built-in motor. Removable cross head.

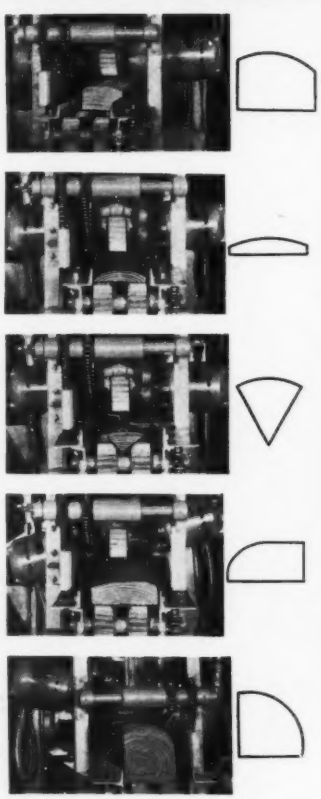


374 CONCAVE KNIFE GRINDER
for grinding concave knives for automatic and hand barkers.



Operator's side, Stetson-Ross Barker 43 showing the simplicity of Barker which is entirely controlled by one operator. BELOW: Reverse view of Barker showing air or steam lifting motor (at lower left) and electric built-in motorized barking head, with slewing motor at top. Patented in U. S. and Canada.





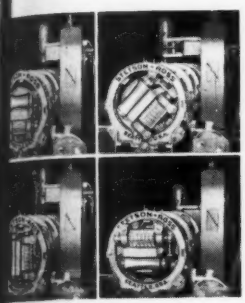
Methods suggested for sawing logs. Blue prints of many more by request. At the right is illustrated a variety of shapes entering the 22 Barker.



WB-22 AUTOMATIC BARKER with concave head. Air or steam cylinder lift—electric motor tilt. Variable, reversible feed—machine in complete control of operator.
Patented in U. S. and Canada

MACHINES *for preparing pulpwood*

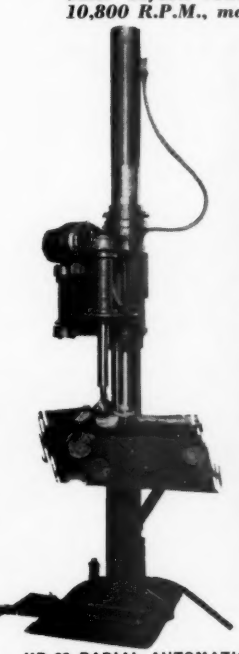
BROUTERS



ove: End view showing how pulp-od slab can be rotated for "Brout-g" defective wood on all surfaces. e four views show log sections ed to any angle and fed forward backward to any position for fur-r inspection and brouting, all the ile securely clamped at any posi-n or angle.

elow: Letters cut in 6-inch by 16-ch by 48-inch slab illustrate how Brouter" bits can be accurately ntrolled for routing out defects.

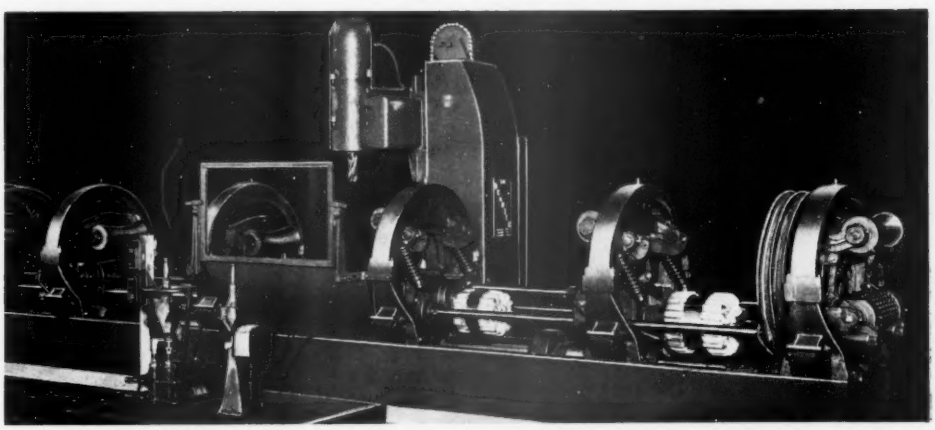




KB-23 RADIAL AUTOMATIC KNOT BORER
Steam feed — stock tilted to permit boring toward heart.



373 PEWEE GRINDER
¼ H.P., 12,000 R.P.M. Motor—for sharpening knives in any type machine.



STETSON-ROSS 44-47 Brouter for long cants. This machine has introduced a revolutionary method of pulpwood cleaning. Knots are bored out, and ingrown bark and other defects routed. Hence, the name "Brouter." A 45-H.P. motor, operating at 10,800 R.P.M., makes this a high production machine. (Patent applied for)



NEW

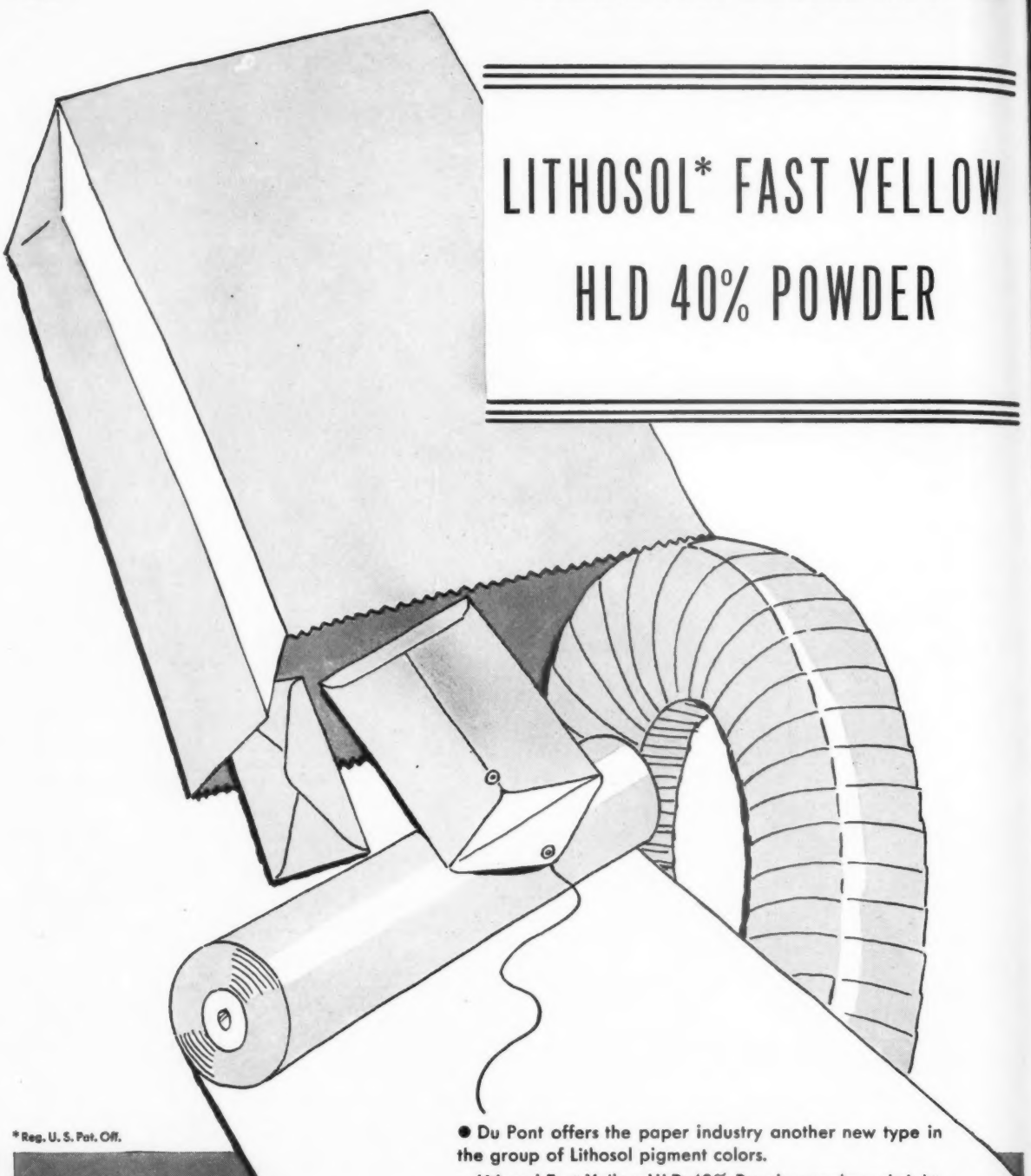
Operator's side of Stetson-Ross "Brouter" 55 for short wood. (Below) Showing bit of 55 in action on short cant. (Patent applied for)



In the broad field of woodworking the name Stetson-Ross means high speed production and high efficiency. With our Barkers and "Brouters," the answer is high production and cleaner chips with the greatest percentage of recovery on record. IF WE HAVE NO MACHINE FOR YOUR EXACT NEEDS WE WILL BUILD ONE. Our engineers are constantly designing special equipment.

STETSON-ROSS MACHINE CO. - *Seattle, U.S.A.*

LITHOSOL* FAST YELLOW HLD 40% POWDER



* Reg. U. S. Pat. Off.

DU PONT DYESTUFFS

E. I. DU PONT DE NEMOURS & CO., INC.,
Organic Chemicals Department
Dyestuffs Division
Wilmington, Delaware, U. S. A.

● Du Pont offers the paper industry another new type in the group of Lithosol pigment colors.

Lithosol Fast Yellow HLD 40% Powder produces bright, greenish shades of yellow and when used in combination with Du Pont Paper Blue S or Lithosol Fast Green B Powder (P. A. F.), a wide range of greens may be obtained.

This color is particularly suitable for fast-to-light shades on envelope, bag, tire-wrap and similar types of stock. It is in the form of a very fine, well dispersed powder and possesses generally satisfactory dyeing properties. The new product wets out and disperses readily and is recommended for dyeing in the beater as well as for coating work.

An outstanding characteristic is that it will not darken or turn black on exposure, which is characteristic of the chrome and canary yellows. Careful control during manufacture assures a product of consistent uniformity.

CROWN MATCH COMPANY
Los Angeles
Products
Paper Book Matches

●

CROWN WILLAMETTE PAPER COMPANY
Division Crown Zellerbach Corporation
Camas, Wash.; West Linn, Ore.; Lebanon, Ore.
Products

Towels—
- Alfibre—Senior, Junior and Midget (folded)
- Alfibre—(Roll)
- Aristocrat, 2-ply (folded)
- Krafspun—Senior, Junior and Midget (folded)
- Crown Kraft—Midget (folded)
- Radiant—(Roll)
- Milady Household Roll Towells

Bakers Bags—
- Crown Satina Sulphite Bread Bags
- Crown Bleached Satina Sulphite Bread Bags

Bleached Sulphite Wrapping—
- Crown Snowfibre

Butcher Papers—
- Crown Alpine Meat Wrap—S. F. White Full Bleached
- Crown Meat Wrap—S. F. Natural
- Crest Meat Wrap—S. F. or W. F. Natural
- Crest Butcher Fibre—W. F. Mottled, Natural
- Crest Moistite Butcher—Dry Finish (Natural), Pink, White
- Crest Veribest Butcher—S. F. Pink
- Premium Meat Wrap—Pink

Citrus Tissues — Plain and Printed
- Crown Citrus

Colored and Striped M. G. Sulphite Wrapping—
- Crown Damask Alfibre—M. G. wide stripe

Commercial Wrapping Tissue—
- Crown Snowtex Tissue — Full Bleached White
- Crestex No. 1½ Tissue—Unbleached White and Manila
- Crest Du Plex Tissue—M. G. Unbleached White
- Lustex Tissue—M. G. Full Bleached White

Converting Kraft—
- Crown Grocery Bag Paper
- Crown Envelope Kraft
- Crown Gumming Kraft
- Crown Asphalting Kraft
- Crown Waxing Kraft

Drawing Manila—
- Crown Drawing Manila

Envelope Manila—
- Crown Envelope Manila

Excelsior Paper—
- Crown Tissue Excelsior

Fruit Papers —Plain and Printed—
- Crown Satina Fruit Wrap
- Crown Alfibre Fruit Wrap
- Crown Bleached Alfibre Fruit Wrap
- Crownoil Unbleached Alfibre Fruit Wrap
- Crownoil Unbleached Alfibre Fruit Wrap
- Crown Copperized Alfibre Fruit Wrap
- Crown Tomato Wraps—M. G. or M. F.—Pink, White or Manila
- Crown Cantaloupe Wrap—Treated Pink or Manila

Grocery Bags—
- Crown Kraft—S. O.
- Otter, Reliance, Eagle—S. O.
- Monarch—Striped M. F. Kraft—S. O.
- Shamrock Kraft—S. O. Green
- Bee—Unbleached Sulphite—S. O.
- Commander Kraft—Sq.
- Pure Fibre—(Unbleached Sulphite) —Sq.
- Snowfibre — Bleached Sulphite — S. O.

Gummed Tape—
- Crown Gummed Tape
- Crest Gummed Tape

Ham Wraps—
- Crown Ham Wraps

Kraft Wrapping—
- Crown XX Kraft, Brown, M. F. Plain
- Monarch Kraft, Brown, M. F. Striped
- Crown Kraft—Natural Brown, M. F. Plain
- Crown Kraft—Silvertone Gray, M. F. Plain
- Crown Damask Kraft — Natural Brown, M. G. wide stripe
- Crown Damask Kraft — Silvertone Gray, M. G. wide stripe
- Crown Satina Kraft—Natural Brown, M. G. narrow stripe
- Crown Satina Kraft — Silvertone Gray, M. G. narrow stripe

Manifolding Paper—
- Crown Manifolding Tissue

Manila Wrapping—
- Crown Manila
- Crown Manila (Bakers 20 lb.)

Mill Wrappings—
- Crown Mill Wrapper

Napkins—
- Embossed, Genuine Crepe, Semi-crepe, Full Bleached Napkins
- Fixture and Special-fold Napkins
- Package Napkins — Full Bleached and colors

Newsprint—
- Standard News (rolls)
- Commander News (sheets)
- Crown Printers Roll News
- Crown Printers Sheet News
- Crown Flat-bed Sheet News
- Crown Pink, Green and Peach News

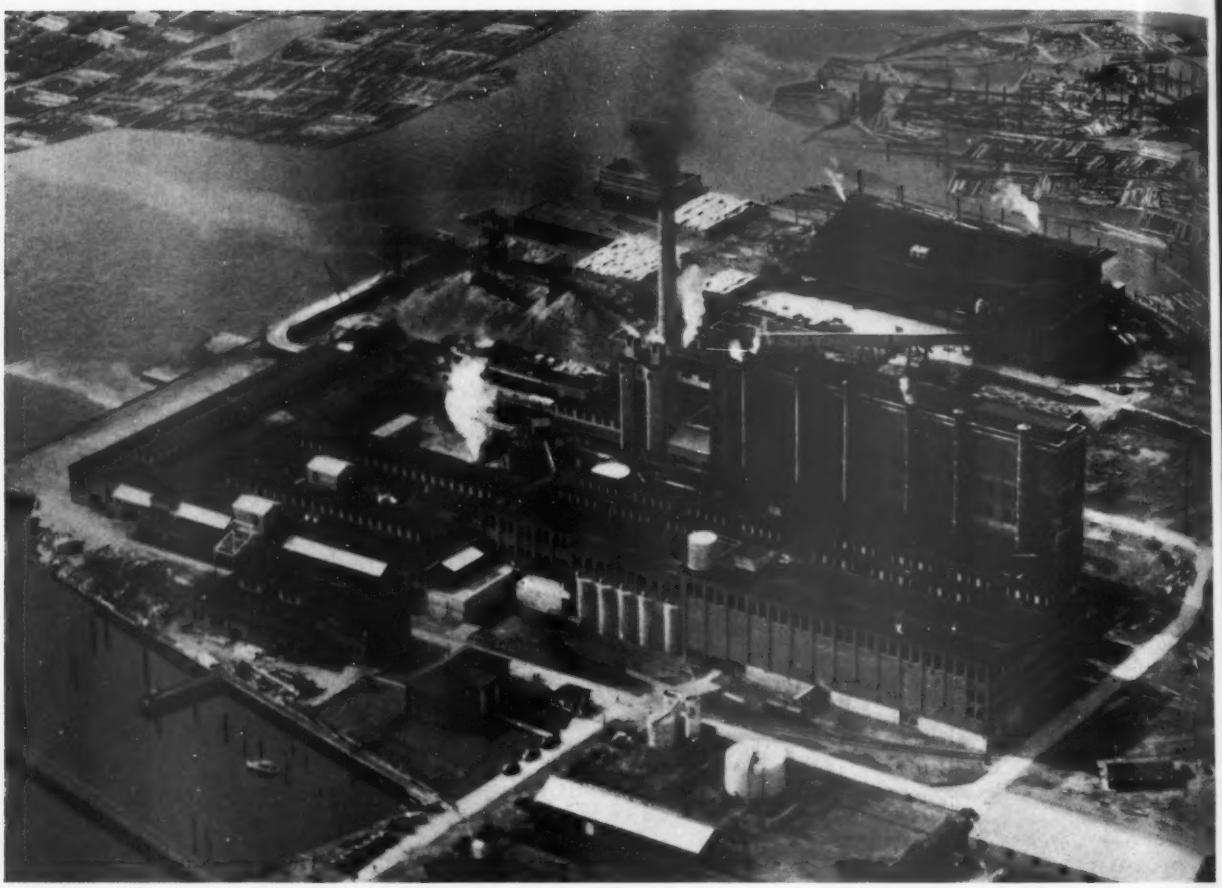
Odd Bags—
- Crown Carbon Black Bags
- Crown Banana Bags
- Crown Notion Bags
- Crown Millinery Bags
- Crown Garment Bags
- Crown Liquor Bags
- Crown Barrel Bags
- Crown Poultry Bags
- Crown Super Bags
- Crown Nail Bags
- Crown Confectionery Bags
- Crown Laundry Bags
- Crown Shopping Bags

Roll Toilet Tissue—
- 10 Lb. Fourdinier Tissue—650-1000 and 2000 count
- 10-Lb. Fourdrinier Tissue—1000 and 200 count
- 10-Lb. Fourdrinier Notched Oval Tissue — 400 count — 7 and 8-oz. rolls
- 12-Lb. Full Bleached Tissue—1000 count
- 12-Lb. Unbleached — Semi-crepe —650 count



Courtesy of the Washington State Progress Commission

BAGS, BAGS AND STILL MORE BAGS for every purpose ' ' ' High speed bag making machines run by skilled operators produce thousands per hour ' ' ' Paper bags for carrying a multitude of products from a penny's worth of candy to nearly a hundred pounds of cement ' ' ' In the picture, a part of the large paper bag making plant at the Camas, Washington, pulp and paper mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation.



HIGH GRADE
BLEACHED
SULPHITE PULP

Annual Capacity Approximately 165,000 Tons

SOUNDVIEW PULP COMPANY

EVERETT, WASHINGTON

16-Lb. Unbleached — Semi-crepe—4-5-6-7 and 8-oz rolls
Full Bleached Genuine Water Crepe —6-7-8 oz. rolls
Semi-Bleached Genuine Water Crepe —6-7-8-oz. rolls

Specialty Bags—Plain and Printed—
Crown Raisin, Prune, Peach and Fig Bags

Raisin Tray—
Crown Sunbeam Raisin Tray

Salesbook Manilas—
Crown Salesbook Manila

Sulphite Box Liners—
Crown Water Crepe Box Liners —Pink, Blue and White
Crown Machine Crepe Box Liners—Pink, Blue and White
Crown Uncreped Box Liners—Pink, Blue and White

Sulphite Wrapping—
Crown Manila
Crown Alfibre
Crown Grocer Wrap

Tire Wraps—
Crown Tire Wraps

Waxing Sulphite
Crown Opaque Bread Wrap
Crown Bleached Waxing Sulphite

Waxing Tissue—
Crown Snowtex Waxing Tissue
Crestex Waxing Tissue

Waxed Papers—
Crown Waxfibre
Alpine Waxfold
Crest Waxfibre
Florist Tissue

Waterproof Paper (Laminated)—
Crown Laminated Kraft

●

CROWN WILLAMETTE PAPER CO.
Division Crown Zellerbach Corporation
Los Angeles

Products

Self-opening Grocery Bags (Otter Kraft)
Fruit Wraps, plain and printed

●

CROWN ZELLERBACH CORP. NATIONAL PAPER PRODUCTS CO. DIVISION
Port Townsend, Wash.

Products

.016 Kraft Liner Board
.030 Kraft Liner Board
.016 to .038 Suit Box Board
Cement Bag Paper
Grocery Bag Paper
Sack Paper
Kraft Wrapping Paper

●

CRYSTAL PAPER SERVICE CORP.
Los Angeles

Products

"Crystal" Paper Drinking Cups
"Crystal" Paper Souffle Cups
"Crystal" Paper Food Containers
"Crystal" Water Bottle Caps

D

DIXIE-VORTEX CORP.
Los Angeles, Calif.

Products

Paper Water Cups
Paper Soda Cups
Paper Ice Cream Cups and Containers
Cellophane-Wrapped Packaged Paper Cups

●

E

EL REY PRODUCTS CO.
Los Angeles

Products

Asphalt Roofing
Asphalt Slate Surfaced Shingles
Composition Shingles
Saturated Lining Felt
Saturating Felt
Deadening Felt
Red and Gray Duplex Sheathing
Car Linings
Industrial Floorings
Dry Felts
"Metalic" Surfaced Roofing

●

ENVELOPE MANUFACTURING CO.
Los Angeles

Products

All types of Envelopes

●

EVERETT PULP & PAPER CO.
Everett and West Tacoma, Wash.

Products

Book Papers—
Everett English Finish Book, White, India, Yellow, Blue, Pink, Green, Orange
Nautilus E. F. Book, White
Everett Melody E. F. Book—White only
Everett Melody Super Book—White only
Symphony E. F. Book, White
Symphony Super Book, White
Masterpiece Book White
Everett Super Book, White, India
Nautilus Super Book, White
Everett Melody E. F. Book—White only
Everett Melody Super Book—White only
Everett Art Book (English Finish) White, India
Everett Monastery Text (Eggshell), White, India
Nautilus Eggshell, White
Anchor E. F. Book, White
Binnacle E. F. Book, White
Ensign E. F. Book, White
Everett Super Rotogravure, White
Everett Soap Wrapper (Alkali Proof), White
"Hard-Wear" Catalog White
Everett Non-Fading Poster, White, Orange
Everett White Wove Envelope
Everett Printing Manila — (Printcraft)
Everett Blanking Paper—White

Label and Lithographic Papers
Litho Poster, White
Everett M. F. Label, White—
Everett Super Label, White—Regular
Everett Super Label, White—Tub Sized
Everett Super Label, White—B Finish—Regular
Everett Super Label, White—B Finish—Tub Sized

Offset Papers—
Biplane Book (No. 1 Offset) White —Tub Sized
Twinphase Book (No. 2 Offset) White—Tub Sized
Everett No. 3 Offset—White

Writing Papers—
Everett Railroad Writing (O. P. S.) White, Amber, Blue, Pink, Green
Everett Penmanship Writing (M Grade) White
Everett No. 4 Opacity Bond, White Canary, Buff, Blue, Pink, Green, Goldenrod
Everett Stadium Bond, White, Canary, Buff, Blue, Pink, Green, Goldenrod

Mimeograph Papers—
Everett Signwell Mimeo (152X Hard Sized) Whte Wove, Blue, Pink, Canary, Buff, Green, Goldenrod
Everett Laid Mimeo (Slack Sized) White, Blue, Pink, Canary, Buff, Green, Goldenrod
Everett No. 4 Mimeo Bond (Hard Sized) White, Wove
Pensign Laid Mimeo (Slack Sized) White
Pensign Wove Mimeo (Hard Sized) White, Blue, Pink, Canary, Buff, Green, Goldenrod
Binnacle Laid Mimeo (Slack Sized) White
Binnacle Wove Mimeo (Hard Sized) White
Everett Copiwell Papers (Duplicating Papers) 3 grades

Tablets and Stationery—
Li-Rite Coil Wire Bound Notebooks, Composition Books, and Commercial Stationery
Tablets, Pads, Composition Books, Notebooks and Fillers
Opaque School Papers
Drawing Papers
West Trade Commercial Stationery
Federal Reserve Perforated Pads
West Trade Columnar Pads
Adding Machine and Teletype Paper

F

FIBREBOARD PRODUCTS, Inc.
Port Angeles, Sumner, Wash.
Los Angeles, Stockton, Antioch, Calif.
Honolulu, T. H.

Products

Boxboards—
Boxmakers Grades
Tagboard
Bristol Board
Binders' Board
Kraft and Jute Liners
Corrugating, Rag, Straw and Sulphite Board

Paper Cans: Tubes—
Paper Cans
Coffee Cans
Special Cottage Cheese Cans
Drug Cans
"White-Tite" Cans
Double "White-Tite" Cans
Paper Caps and tin ends of all descriptions
Mailing Tubes
Telescope Mailing Tubes
Screw Top Mailing Cases
Kraft Tuck-end Mailing Tubes

GENERAL MANAGER:

"Our customers certainly like our paper."



MILL SUPERINTENDENT:

"There's a reason. We use PMC prepared size."

SUPERIOR PMC CHEMICALS

PAPER MAKERS CHEMICAL DIVISION

HERCULES POWDER COMPANY

Incorporated

KALAMAZOO, MICHIGAN

STONEHAM, MASS.	HOLYOKE, MASS.	PROVIDENCE, R. I.	ALBANY, N. Y.	NEW YORK, N. Y.	WILMINGTON, DEL.
ATLANTA, GA.	SAVANNAH, GA.	JACKSONVILLE, FLA.	PENSACOLA, FLA.	MARRERO, LA.	KALAMAZOO, MICH.
MILWAUKEE, WIS.	CHICAGO, ILLINOIS	PORTLAND, ORE.	SAN FRANCISCO, CAL.	FREEMAN, ONT.	ERITH, ENGLAND

PM-48

Egg Packing—
6x6 Fillers
Egg Cartons, 3x4 and 2x6
"Cushion-Pak" Egg Cartons, 3x4 and 2x6
Egg Case Flats

Folding Cartons
Raisin and Dried Fruit Cartons
Fruit and Vegetable Packing
Fruit and Berry Baskets
Tea and Coffee Cartons
Cereal Cartons
Display Cartons
Frozen Food Cartons
Doughnut Cartons
Butter and Ice Cream Cartons
Miscellaneous Folding Cartons
"Pure-Pak" Milk Containers

Corrugated Products—
Corrugated Rolls
Photo Mailers
"Super-Test" Corrugated Shipping Cases
Milk Cases
Coffee Cases
Beer Cases
Wine Cases
Glass Cases
Miscellaneous Cases
Cereal Cases
Butter Cases
Display Stands
Frozen Food Cases

Solid Fibre Products—
"Super-Test" Solid Fibre Shipping Cases
"Levelbest" Canners Cases
Fruit and Vegetable Cases
Cannery Cases
Dried Fruit Cases
Salmon Cases
"Re-file" Cases
Butter Cases
Miscellaneous Cases
Cereal Cases
Soap Cases
Liquor Cases
Hexagon Asphalt Drums

Pails—
Food Pails
Ice Cream Pails

Commodity Folding Boxes—
Cake Boxes
Laundry Boxes
Cake Circles
Candy Boxes
Florist Boxes
Clothing Boxes
Hat Boxes
Millinery Boxes
Collar Bands

Fruit Packing—
Berry Baskets
Liners—Corrugated and Chip
Pads—Corrugated and Indent
Collars
Fig Trays
Fig Partitions
Fruit Baskets
Peach Shims
Orange Shims
Basket Shims
Shims—Plain and Combination
Basket Circles
Tree Bands
Labels

●

FIELD-ERNST ENVELOPE CO.
San Francisco

Products

Printed and Plain Business Envelopes for mailing and filing

FIR-TEX INSULATING BOARD CO.
St. Helens, Ore.

Insulating and Acoustical Board
Fir-Tex Building Board
Fir-Tex Ivrykote Board
Fir-Tex Finish Plan
Fir-Tex Insulating Lath
Fir-Tex Insulating Tile
Fir-Tex Refrigeration Insulation Blocks
Fir-Tex Roofing
Fir-Tex Hardboard
Firkote Sheathing

●

LLOYD A. FRY ROOFING CO.
Compton, Calif.

(Announced construction of a plant in Portland)

Products

Asphalt Roll Roofing
Asphalt Slate Surface Shingles
Slate Roll Roofing
Rag Felt
Deadening Felt

G

GATES PAPER CO., LTD.
Los Angeles

Products

Round Fibre Cans
Mailing Tubes of all types
Paper Cores

●

GRAYS HARBOR PAPER & PULP CO.
Hoquiam, Wash.

Products

Sulphite Bonds
Mimeograph
Manila
Writing
Offset
Specialties

H

HAWLEY PULP & PAPER CO.
Oregon City

Products

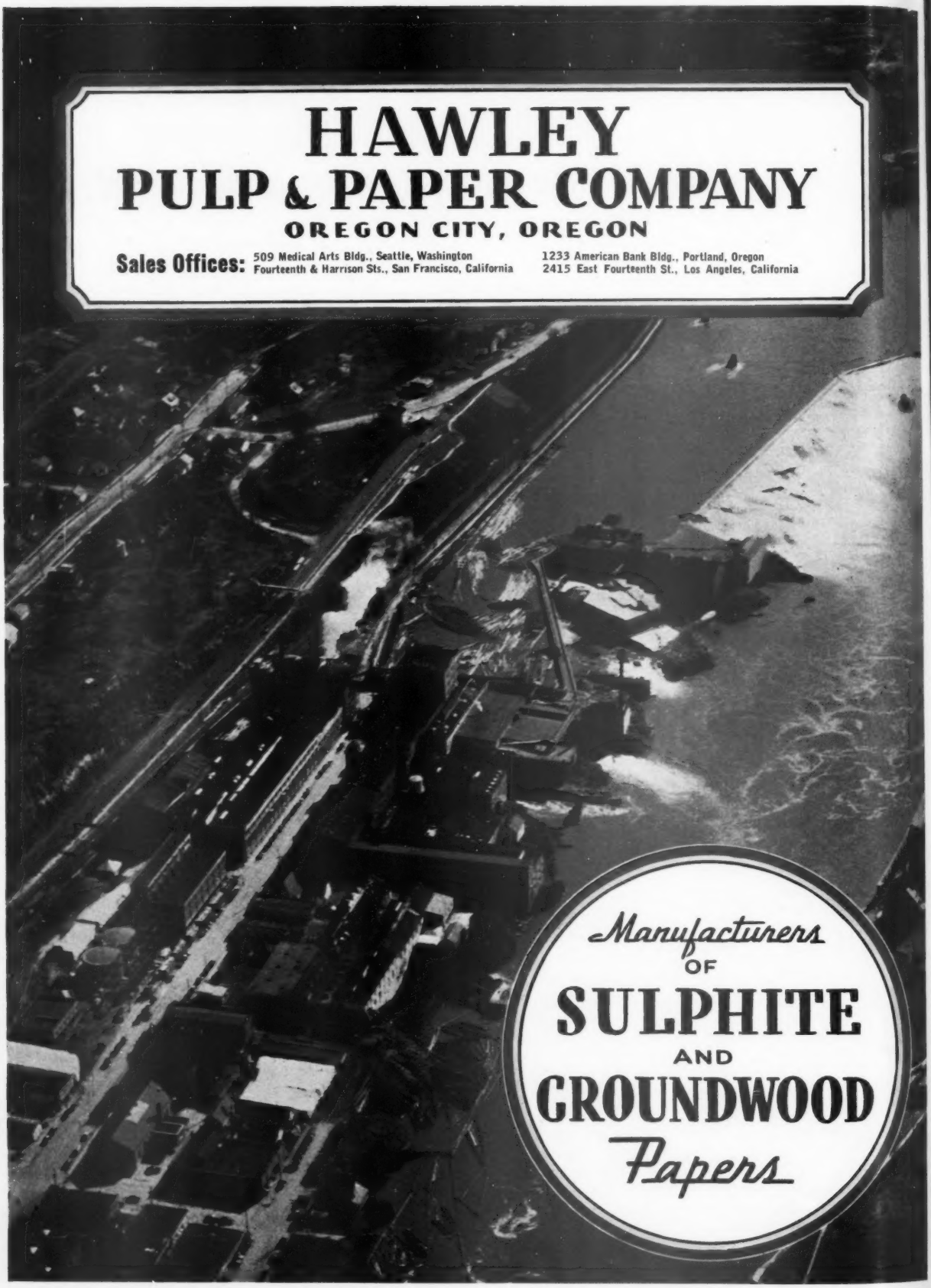
Newsprint—
Standard Shade and Blue White Rolls and Sheets
Poster Paper
Drawing Manila—Standard Colors
Sulphite Wrapping—
Cheviot Wrapping in Blue, Green, Red, Tan and Grey
Cheviot Bristol in Eight Colors
Cheviot Book and Mimeo Paper in Seven Colors
Treated Cheviot Innerwrap
Cheviot Printrap in six colors
Cheviot Envelope Sulphite in four colors
Cheviot Litewrap
Meat Wraps in Bleached, Manila and Cheviot Colors
Tailors Pattern in Black and Green
Grocers and Butchers Wrapping
Bakers Manila
Macaroni Papers
Treated Moistpruf Wrapping in natural white and colors
Sulphite Screenings
Corrugating Boxboard
Deciduous and Soft Fruit Wrappers
Tissue Paper, Bleached and Unbleached
Bleached Toilet Tissue
Toilet Tissues in Rolls
Towels, Interfolds and Rolls for Time-Controlled Towl-Craft Cabinets
Grocery Bags
Kraft Wrapping Paper, No. 1 and No. 2



DIRTY HANDS AND FACES use up a lot of paper towels in a year's time ✓ ✓ ✓ Many men and women keep busy in Pacific Coast converting plants supplying the demand ✓ ✓ ✓ In this photograph kraft paper towels are being discharged from the towel making machine and packed into fibreboard shipping cases ✓ ✓ ✓ Converting plant of the St. Helens Pulp & Paper Company, St. Helens, Oregon.

HAWLEY
PULP & PAPER COMPANY
OREGON CITY, OREGON

Sales Offices: 509 Medical Arts Bldg., Seattle, Washington
Fourteenth & Harrison Sts., San Francisco, California
1233 American Bank Bldg., Portland, Oregon
2415 East Fourteenth St., Los Angeles, California



I

INLAND EMPIRE PAPER CO.
Millwood, Wash.

Products

Newsprint—
- Rolls and Sheets
- White, cream, colors

High Grade News—
- Special halftone and magazine print
- No. 1 Colored Poster

Mimeograph News—
- Laid and wove
- White and six colors
- Sub. 16, 20 and 24

Coarse Papers—
- Car Linings
- Screenings
- Ham Wrap
- Sheathing

Bond—
- No. 4 Bond in white and colors
- Mimeo Bonds

Ledger—
- No. 4 Ledgers

Book—
- Eggshell Book
- English Finish Book
- M. F. Book

Envelope—
- Fibretint Envelope
- White Wove Sulphite Envelope

Wrapping—
- Fibretint Wrapping
- Empire Butchers Bleached
- Butchers Sulphite
- Fibretint Butchers
- Butchers Manila
- Inland Kraft Wrapping

Sulphite and Groundwood Specialties—

J

THE JAITE COMPANY
Jaite, Ohio
Plants: St. Helens, Ore. Wilmington, Cal.
Offices: San Francisco

Products

Multiwall Sewn Paper Bags

●

JOHNSON ENVELOPE CO.
San Diego, Calif.

Products

- Catalog Envelopes
- Expanding Envelopes
- File Folders
- Filing Envelopes
- Mailing Envelopes
- Merchandise Envelopes
- Photo Mailers
- Tag Envelopes

●

JOHNS-MANVILLE SALES CORPORATION
San Francisco

Products

J-M Asbestos Shingles—
- Dutch Lap, Hexagonal No. 35 American Method

J-M Asbestos Sidings
- Cedargrain
- Texture Shingles

J-M Rock Wool Home Insulation Batts—
- Type A—Loose Wool
- Type B—Ful-Thik
- Type B—Semi-Thik
- Type C—Junior

J-M Roofing Materials
- Built-Up Asbestos & Rag Felt Roofings
- Asphalt Shingles and Sidings
- Smooth Surfaced Roll Roofings
- Slate Surfaced Roll Roofings
- Building Papers—Roofing Felts
- Roof Coatings and Putties

J-M Industrial Building Materials
- J-M Waterproofing Materials
- J-M Celite for Concrete

J-M Power Products
- Refractories
- Miscellaneous Power Products
- Transite Flue Pipe
- Transite Pressure Pipe
- Transite Sewer Pipe
- Asbestos Paper
- 85% Magnesia Insulation
- Low Pressure Insulations
- High Pressure Insulations
- Insulating Cements
- Insulating Powders
- Insulating Brick

Filter Aids & Mineral Fillers

L

LAMINATED PAPER BOARD
San Francisco, Calif.

Products

Laminated Board

W. P. LASS COMPANY, INC.
Santa Cruz, Calif.

Products

Convert Paper into Floral Supplies—
- Pots and Vases

●

LONGVIEW FIBRE COMPANY
Longview, Washington

Products

Board—
- Sulphate Test Liner
- Sulphate Corrugating Board
- Kraft Boxboard

Paper—
- Plain and Watermarked Machine Glazed Kraft Wrapping
- Plain and Watermarked Machine Glazed Kraft Bag Papers
- Plain and Watermarked Machine Glazed and Machine Finished Bleached Kraft
- Machine Glazed Envelope Kraft Papers
- Machine Glazed and Fourdrinier Tire Wrap
- Fourdrinier Machine Finished Wrapping Papers
- Fourdrinier Machine Finished Butchers' Papers
- Fourdrinier Machine Finished Bag Papers
- Printed Wrapping Papers

Bags—(Plain or Watermarked, Machine-glazed or Machine Finished, Printed or Unprinted)
- Grocery Bags
- Millinery and Notion Bags
- Garment Bags
- Barrel Bags
- Poultry Bags
- Nail Bags
- Laundry Bags
- Cigarette Carton Bags
- Doughnut Bags
- Liquor Bags
- Shopping Bags
- Bread Bags
- Confectionery and Pop Corn Bags
- Sugar Bags
- Raisin Bags
- Bag Specialties

Containers—
- Solid Fibre Shipping Containers
- Corrugated Shipping Containers

Folding Boxes—
- Clothing Boxes
- Laundry Boxes
- Cake Boxes
- Pie Boxes
- Millinery Boxes
- Folding Box Specialties

Waxed Paper Products—
- Waxed Papers
- Waxed Butter Cube Bags
- Waxed Egg Crate Liner Bags
- Waxed Specialties

Asphalted Paper Products—
- Duplex Waterproof Kraft Sheathing Paper
- Duplex Waterproof Kraft Car Liner
- Duplex Waterproof Kraft Egg Crate Liner Bags
- Duplex Waterproof Kraft Poultry Box Liner Bags
- Asphalted Specialties

Crepe Paper Towels & Creped Specialties

●

L. A. ENVELOPE MANUFACTURING CO.
Los Angeles

Products

- Business Envelopes
- Catalog Envelopes
- Special Size Envelopes

●

LOS ANGELES PAPER BAG CO.
Los Angeles

Products

Paper Bags—All Types—All Grades
- Grocery
- Millinery & Notion
- Garment
- Shopping
- Sacks
- Hardware
- Sugar
- Candy
- Bakers

Bag printing of all kinds.

M

MEKANIKLOTH COMPANY
Bellingham, Wash.

Products

Mekan-i-Kloth—
- Soft wiping tissue

N

NATIONAL CARD, MAT & BOARD COMPANY
Los Angeles

Products

Artists Illustration Board
Backing Board
Embossed Boards
Linen Finish Boards
Calendar and Photo Mounts
Card and Mat Board Products
Coated Board
Cover Papers
Display Cases and Easels
Greeting Card Stock
Illustration Boards and Bristol
Paper Board Specialties
Pasted Board
Picture Backing Board
Poster Board and Paper
Box Cover Papers
Checkbook Cover
Cover Paper Decorated
Cover Paper Embossed
Foil Papers
Melton Mounts
Memo Book Cover
Mount Boards

O

OREGON PULP & PAPER CO.
Salem, Ore.

Products

White and Colored Bond
Writings
Envelope
Ledger
Mimeograph
Glassine, greaseproof—
  Bleached and unbleached
Specialties
Manifold
Parchment

●

OWENS-ILLINOIS PACIFIC COAST COMPANY
San Francisco

Products

Corrugated Shipping Cases (1)
Corrugated Fruit Box Pads
Liners and Collars (2)

Brands

(1) OnIzed
(2) No-Bruz

P

PACIFIC COAST ENVELOPE CO. DIVISION
San Francisco

Products

Printed and plain envelopes for mailing and filing

●

PACIFIC COAST PAPER MILLS
Bellingham, Wash.

Products

Toilet Tissue—
  Bleached, Manila and unbleached white roll
  Interfolded and Flat Pack
Mekan-i-kloth
Napkins—
  Colored, embossed
  Flat, quarter-fold
  Dispenser fold
  Sanitary napkins
Towels—
  Bleached Kraft, unbleached
  Sulphite and sulphate Towels

Brands

M. D. Tissue, etc.
Sewdette Sanitary Napkins

●

PACIFIC MILLS, LIMITED
Ocean Falls, B. C.

Converting Plant, Vancouver, B. C.
Newsprint
Kraft paper, M. F. and M. G. plain and striped
Butchers Manila
Sulphite tissues
  Toilet tissue
  Napkins
  Fruit Wraps
Towels
Bread Wraps
Printed Wrapping
Plain and printed waxed papers
Solid Fibre Shipping Cases
Gummed Kraft and Sulphite Tape—
  Plain and Printed

●

PACIFIC NORTHWEST PAPER MILLS, Inc.
Portland

Safety Paper
Adwrap Decorated Wrappings
Specialties

●

PACIFIC ROOFING CO.
Portland, Oregon

Products

Roll Roofing Felts, Building Papers, Roof Coating and Asphalt
Complete line of Roofings—Shingles,

●

PACIFIC STRAW PAPER & BOARD COMPANY
Longview, Wash.

Products

Combination Board
Plain Chip Board
Solid News
News and Manila Lined
Bleached Manilas
Mist Gray and Colored Boards
Container Board
Test Board
White Patent Coated Board
Solid Pulp Board
Egg Case Filler
Tag Boards
Folding Boxes
Wax Lined Food Trays

●

PACIFIC WAXED PAPER CO
Seattle, Wash.

Products

Printed Waxed Paper—
  Bread Wrappers
  Candy Bar Wrappers
  Frozen Fruit & Vegetable Wrappers
  Transparent Cake Wrappers
  Adsealit Bands
Plain Waxed Paper
  Waxed Glassine
  Transparent Cake Wrappers
  Vegetable Crate Liners
  Delicatessen Paper
  Colored Twisting Papers
Bags—Plain and Printed
  Glassine—Waxed and Unwaxed
  Cellophane
  Window Bags
  Dry Waxed Bags
  Laminated Bags
  Specialty Bags of All Kinds
Tredonia Moistureproof Show Case Boxes with Cellophane windows for doughnuts, sweet doughs, layer cakes, and bakery products of all kinds

●

PALMER-LUSE ENVELOPE CO.
606 E. 12th St.
Los Angeles

Products

Greeting Card Envelopes
Wedding Announcement Envelopes
Baronial Type Envelopes
Commercial Envelopes

●

PAPER SUPPLY CO.
Los Angeles

Products

Resale Rolls of—
  Shelf Paper
  Tissue Paper
  Holly Paper
  Decorative Wrappings
  Cellophane
Distributors:
  Ribbons made of "Cellophane"
  Ribbons made of "Pliofilm"
  Glassipa Cellophane Soda Straws, all colors for hot or cold beverages

●

PARAFFINE COMPANIES, INC.
Emeryville, Calif.

Products

Asbestos Siding Shingles
Mineral-Surfaced Shingles
Thermoslab (thick roof slabs)
Roll Roofings
  Mineral-Surfaced Roofings
  a. P & B
  b. Malthoid
  c. Durable
  Smooth-Surfaced
  a. P & B
  b. Malthoid
  c. Durable
  d. Santo
  e. Paramount
  f. Raintite
Building Papers
  1. Urban Sheathing
  2. P & B Light Bldg. Paper
  3. Doublekraft
  4. P & B Heavy Bldg. Paper
  6. 15-lb. Felt
  7. Pabcotite
Commodities
  1. Asphalt Roofing Felt
  2. Asphalt Sheathing Felt
  3. Deadening Felt
  4. Blue Plaster Board
  5. Plaster Lath
  6. Rosin-Sized Sheathing



THIS IS TRONA, CALIFORNIA

SODA ASH - SALT CAKE - BORAX - MURIATE of POTASH

AMERICAN POTASH & CHEMICAL CORPORATION

PACIFIC COAST OFFICE
609 S. GRAND AVENUE
LOS ANGELES

NEW YORK OFFICE
70 PINE STREET
NEW YORK CITY



Elwell-Parker Was First

to Prove Better Methods of Load-Handling in Every Kind of Paper Mill Job

The real expansion of the paper industry came *after* Elwell-Parker began, years ago, to supply Power Industrial Trucks and Cranes to transport bigger loads of pulp, newsprint and flat sheets.

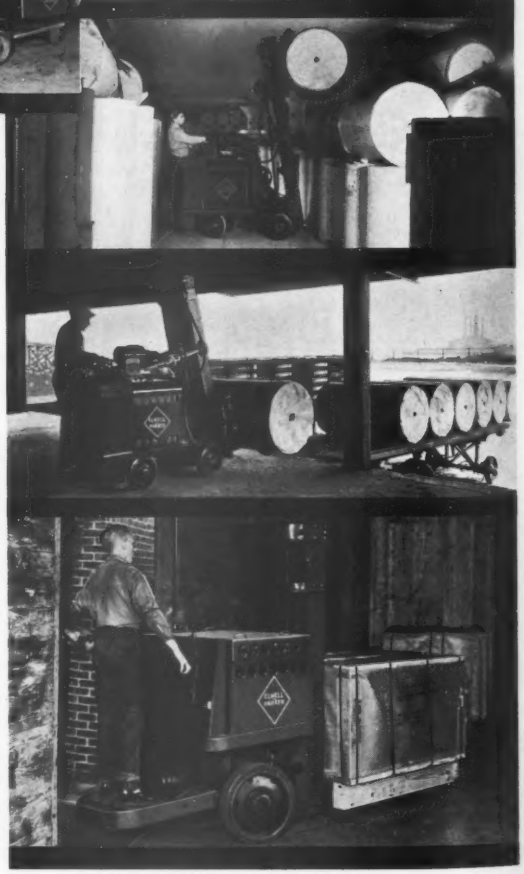
Elwell-Parker first introduced Roll-Handling Trucks. First brought out complete *Paper-Handling Systems*. First enabled Mill Executives everywhere to stop big waste and save big money.

Ask a nearby Elwell-Parker Representative to show how you can put all this invaluable experience to work earning profits for you! The Elwell-Parker Electric Company, 4231 St. Clair Avenue, Cleveland, Ohio.

Northwestern Representative:

COLBY STEEL & ENGINEERING COMPANY

456 Central Bldg., Seattle • Telephone: Elliott 5722



ELWELL-PARKER *Power Industrial* TRUCKS

ESTABLISHED 1893 • BUILDING POWER INDUSTRIAL TRUCKS SINCE 1906

4231

Roof Coatings and Plastics
1. Vitalized Fibre Roof Coating
2. Plain Fibre Roof Coating
3. XXX
4. Pabcobond No. 1072
5. Hydroseal
6. Lap Cement
7. Gutter Paint
8. Floatine
9. Roofing Asphalt

Car Linings
Red Liner
Mulch Papers
Pipe Wrappings
Acaustilite (sound insulating board)
Fibre Wallboards
Isulation Boards
Rock Wool
"Grip - Tread" Mastipave Industrial Floorcovering

Brands

Pabco Brands on all

●

PATERSON PACIFIC PARCHMENT COMPANY
San Francisco

Products

Patapar Vegetable Parchment—Plain, Printed, Waxed and Creped
Durapak Insoluble Crate Liners and Wet Strength Paper—Plain, Printed and Crinkled
Patapar Cookery Parchment
Parchkin Art Parchment
Patapake and Patawite Printing Paper
Patawite Manifold Paper
Waxed Ice Cream Can Liners
Waxed Paper

●

PERFECTION TWINE CO.
Camas, Wash.

Specialty Bags—
Mattress Bags
Casket Covers
Multi-wall Bags
Specialty Shipping Bags
Furniture Bags, etc.
Paper Twines and Cords—
Seaming Twines
Fleece Twines
Handle Cord Twine, etc.

●

PIONEER DIVISION THE FLINTKOTE COMPANY
P. O. Box 120, Arcade Annex
Los Angeles, Calif.

Products

Roofing Division

Rag Roofing—Dry Felt, all weights, 12 to 108 lbs.
Asphalt Mineral Surfaced Shingles
Asphalt Emulsion
Rosin-sized Sheathing
Blue Plasterboard
K-B Asphalt Sheathing
Insulating Papers
Asphalt Products, Paints, etc.
Mulch Papers
Pipe Wrap Coverings
Car Lining Papers
Duplex Kraft Sheathing
Asphalt Saturated Felt
Box Board & Container Division
Pioneer Super White Patent Coated Box Board
Pioneer Super Manila
Pioneer Super Mist Grey and all colors
Pioneer Super Suit Box Boards
Pioneer Super Poster Card Board
Pioneer Black Ebonkote Board
Pioneer Show Print Board
Pioneer Solid News Board
Pioneer Kraft Board Liners
Pioneer Jute Board Liners
Pioneer Pasted Chip
Pioneer Colored Manila Lined Boards
Pioneer Bleached Manila Lined Boards
Pioneer Book Lined Chipboard
Pioneer News Lined Chipboard
Pioneer Shirt Boards
Pioneer Division Boards
Pioneer Fruit Box Liners
Pioneer Fruit Box Shims
Pioneer Kraft Metal Lath Backing
Pioneer Plaster Board Liner (kraft)
Pioneer Corrugated Containers
Pioneer Corrugated Partitions
Pioneer Corrugated Beer Cases
Pioneer Corrugated Canners Cases
Pioneer Corrugated Shipping Cases
Pioneer Corrugated Export Cases
Pioneer Corrugated Display Cases
Pioneer Corrugated Display Stands
Pioneer Single Faced Corrugated Rolls
Pioneer Solid Fibre Containers of all kinds
Pioneer Solid Fibre Display Cases and Stands
Pioneer Solid Fibre Partitions

●

POMONA PAPER PRODUCTS, INC.
Pomona, Calif.

Waxed Paper Rolls in Cutter Edged Boxes
Paper Napkins for home use

●

POWELL RIVER CO., LTD.
Powell River, B. C.

Products

Newsprint
News Grade Sulphite Pulp

●

PUGET SOUND PULP & TIMBER COMPANY
Anacortes and Bellingham, Wash.

Products

Unbleached Sulphite Pulp

R

RAYONIER INCORPORATED
San Francisco, New York and Seattle

Mills at:
Fernandina, Florida
Hoquiam, Washington
Port Angeles, Washington
Shelton, Washington
Tacoma, Washington

Products

Dissolving Pulp for rayon and staple fibre, cellophane, acetylation, pastics, impregnation, etc.
Bleached Sulphite Pulp for the paper industry
Paper—Sulphite bond, ledger, writing, mimeograph and specialties

S

ST. HELENS PULP & PAPER CO.
St. Helens, Ore.

Products

Bleached and Unbleached Kraft Paper:
Wrapping—both M. F. & M. G.
Envelope
Gumming
Waxing
Bag
Meat Wrapt—Full bleached, semi-bleached
Tire Wraps—Printed or Plain
Fruit and Canteloupe Wraps—Printed or Plain
Box Liners
Toweling
Tissue
Towels—Interfolded & Rolls
Delicatessen—Waxed, Rolls, Cartons, Interfold
Printed Papers of all Kinds—
Paper Bags—
Grocers
Garment
Notion
Beer
Tympan Papers—
Oiled Stencil-Back

●

ST. REGIS KRAFT CO.
Tacoma, Wash.

Products

Sulphate Pulp — Bleached and Unbleached

●

SALINAS VALLEY WAX PAPER CO.
Salinas, California

Waxed Crate Liners
Waxed Specialties
Asphalt Laminated Kraft
Car Liners
Building Paper
Laminated Specialties

●

SANI-GARD COVER CO.
Los Angeles

Products

Paper Toilet Seat Covers

●

SCHMIDT LITHOGRAPH CO.
San Francisco

Products

Lithographed Labels
Lithographed Carton
Lithographed Pasters
Lithographed Display Advertising
Lithographed Direct Mail Advertising
Coated Papers
Corrugated Products

●

SHERMAN PAPER PRODUCTS CORP.
Los Angeles

Products

Baking Cups
Fluted Cake Pan Liners
Die Cup Liners
Labels

ST. REGIS KRAFT CO.

Manufacturers of

FULL BLEACHED KRAFT PULP



More and more users of high grade paper and cellulose materials are learning the advantages of ST. REGIS FULL BLEACHED KRAFT PULP manufactured from WESTERN hemlock, the raw material that has gained for other types of Pacific Coast woodpulps so favorable a reputation in the world markets.

ST. REGIS KRAFT COMPANY

TACOMA, WASHINGTON

Many new advanced features have been incorporated in methods and mechanical devices employed in our Tacoma, Washington, mill to insure latest up to date process in manufacturing FULL BLEACHED KRAFT PULP from WESTERN hemlock.

Printed Gummed Cake Bands
Cake Rounds
Corrugated Glassine Products
Embossed and Printed Glassine Doilies
White Waxed Corrugated Circles
Spruce Cake Rounds

•

SIDNEY ROOFING & PAPER CO., LTD.
Victoria, B. C.

Products

Box Board
Test Board
Felts
Building Paper
Roofing
Bottle Wrap
Asphalt Shingles
Groundwood Pulp

•

SOUNDVIEW PULP CO.
Everett, Wash.

Products

Bleached Sulphite Pulp

•

SPAULDING PULP & PAPER CO.
Newberg, Ore.

Products

Unbleached Sulphite Pulp

U

UNION BAG & PAPER CORP.
Los Angeles
Converting Plant

Products

Grocery Bags, Sulphite and Kraft.
Glassine Bags.
Candy Bags.
Notion and Millinery.
Waxed Bags.
Coffee Bags, Plain and Fancy Printed.
Nail Bags.
Transparent Cellulose Bags (cellophane and sylphrap).
Egg Crate Liners.
Coffee Bag Shipping Containers.
Special Bags of Varied Nature.
Printed Bags—one to 5 colors.
Shopping Bags
Carry Bags
Poultry Bags
Flour Bags
Standard Sacks—Single Wall or Duplex
Liquor Bags
Bread Bags
Doughnut Bags

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U. S. GYPSUM CO.
Southgate, Calif.

Products

U. S. G. Asphalt Shingles
Thatch Point Roll Roofing
Star Slate Roofing
Star Corrugated Roofing
Starco Roofing
Cascade Roofing
Gold Star Roofing
U. S. G. Asphalt Saturated Felts
U. S. G. Building Felt
U. S. G. Saturated Sheathing
Starkote Coated Felt
Kraft Sheathing Paper
Deadening Felts
Duo-Color Sheathing Paper
Blue Plasterboard
Asbestos Felts
Base Sheets
White and Black Top Cap Sheets
U. S. G. Roof Coatings and Cement
U. S. G. Asphalt Emulsions

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U. S. TISSUE CONVERTING CO.
Los Angeles

Products

Tissue Garment Bags
Clothing Boxes
Millinery Boxes

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UNIVERSAL PAPER GOODS CO.
Los Angeles

Products

Special Envelopes
Filing Containers

V

VANCOUVER KRAFT MILLS
Port Mellon, B. C.

Unbleached Sulphate Pulp

W

WASHINGTON PULP & PAPER CORPORATION
Port Angeles, Wash.

Products

Newsprint

•

WEST COAST PAPER PRODUCTS CO.
Portland, Oregon

Products

Bottle Caps

•

WESTERN MANUFACTURING & SUPPLY CO., INC.
Los Angeles

Products

Printed Gummed Sealing Tape
Special Gummed Tape in rolls
Gummed Labels, Printed and Perforated, in sheets and rolls
Eveready Sealers
Automatic and Pull-type Gum Tape Sealers

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WESTERN PAPER CONVERTING COMPANY
Salem, Ore.

Products

Adding Machine Rolls
Glassine and Confectionery Bags
Candy Bags
Cellophane Bags and Specialties
Cash Register Rolls
Aluminum Foil, printed
Greaseproof Specialties
School and Commercial Stationery
Wrapping Specialties
Mechanical Bound and Sewed Composition, Note and Memo Books

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WESTERN PAPER PRODUCTS CO.
San Francisco

Products

Special Bags of All Kinds
Mattress Bags
Furniture Covers
Machinery Covers
Transparent Cellulose Bags
Creped Kraft Bags and Barrel Liners
Die Cut and Folded Liners
Folding
Glueing
Sewing
Special Converting of Paper in All Its Forms

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WESTERN TRANSPARENT BAG CO.
Los Angeles

Products

Printing and Manufacturing Cellophane Bags

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WESTERN WAXED PAPER CO.
Oakland, Los Angeles and Portland

Products

Waxed Papers—Printed and Plain
Waxed Paper Bags—Printed and Plain
Kleerwrap
Riegelite
Western Opaque
Butter Wraps
Bread Wraps
Candy Wraps
Transo
Shredded Waxed Paper
Icepak
Adsealit Bands
Majonnier Liners
Egg Crate Lining Bags
Gummed Tape
Lettuce Crate Kraft
Bread Wrapping Machines
Plant Covers
Waxfibre
Asparagus Wraps
Defiance Sheathing Paper

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WESTMINSTER PAPER CO., LTD.
New Westminster, B. C.

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Toilet Tissues—
Plain, creped, glazed
Wrapping—
Kraft and Sulphite, 15 to 40 lbs.
Vegetable Fruit Wraps—
Plain, oiled, printed
Tissues, all colors
Towels and Napkins
Waxed Paper, plain and printed Specialities
Sanitary Napkins

•

WEYERHAEUSER TIMBER CO.
Longview, Wash.
Everett, Wash.

Products

Bleached Sulphite Pulp
Unbleached Sulphite Pulp

The American Pulp & Paper Mill Superintendents Association, Inc.

+

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WARDMAN PARK HOTEL
WASHINGTON, D. C.
June 13-14-15, 1939

Three days of interesting and informative meetings • Visits to the Government Printing Office, Federal Bureau of Investigation, etc. • Group Meetings • Interesting Speakers. Largest 1939 Exhibit of Pulp and Paper Mill Machinery, Equipment, and Supplies in the Industry.

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A CONVENTION AND A VACATION

THE WORLD'S FAIR NEW YORK, N. Y.

UNITED STATES
PULPWOOD IMPORTS
(Unit: 1 Cord—128 Cu. Ft.)

	Rough	Peeled	Rossed	Chipped	Total
1938	290,453	949,707	15,636	38,142	1,293,938
1937	274,470	1,185,687	24,309	38,402	1,522,868
1936	200,701	977,460	31,597	.....	1,209,758
1935	99,659	937,428	425	.....	1,037,332
1934	180,019	789,158	4,801	.....	973,978
1933	119,852	591,812	11,544	.....	723,208
1932	114,366	531,158	2,664	.....	648,188
1931	186,613	817,926	17,128	.....	1,021,667
1930	331,158	1,234,678	16,365	.....	1,582,201

Source: Department of Commerce, Bureau of Foreign and Domestic Commerce.

EXPORTS OF NEWSPRINT FROM UNITED STATES
(Tons)

Source—U. S. Department of Commerce

Country—	1935	1936	1937	1938
Europe	159	61	172	.....
Canada	9	177	64	.....
Central America	800	407	1,479	925
Mexico	3,607	6,748	52	.....
Cuba	3,781	3,192	4,634	1,570
South America	1,755	1,207	4,403	941
China and Japan	10,610	1,044	3,869	.....
Philippine Islands	1,459	1,492	1,720	883
Other Countries	302	268	665	1,326
Total	**22,582**	**14,596**	17,058	5,645

CANADA
PULP PRODUCTION
(Tons of 2,000 lbs.)

	Mechanical Tons	Sulphite Tons	Sulphate Tons	Total Tons
1920	1,090,114	654,273	188,487	1,922,774
1921	931,560	476,929	131,337	1,539,826
1922	1,241,185	678,878	217,862	2,137,925
1923	1,449,106	749,668	224,812	2,413,586
1924	1,427,782	768,035	218,207	2,414,024
1925	1,621,917	842,785	242,207	2,706,909
1926	1,901,268	995,203	256,074	3,152,545
1927	1,922,124	1,016,060	262,512	3,200,696
1928	2,127,699	1,117,227	256,969	3,501,895
1929	2,420,774	1,236,232	250,104	3,907,110
1930	2,283,130	1,076,804	188,253	3,548,187
1931	2,016,480	941,586	145,156	3,103,222
1932	1,696,021	941,579	144,367	2,781,967
1933	1,859,049	937,313	182,988	2,979,350
1934	2,340,441	1,020,493	205,980	3,566,914
1935	2,458,000	1,025.000	206,000	3,689,000
1936	2,910,338	1,168,927	273,494	4,352,759
1937	3,308,517	1,373,232	312,741	4,994,490
1938	2,650,000	925,000	258,000	3,833,000

Above totals are of mechanical, sulphite and sulphate only and do not include soda, screenings or miscellaneous grades.

INVENTORIES

The Bureau of Census in taking the Census of Manufacturers in 1937 for the first time asked for data on inventories of raw materials and supplies and of finished products in the manufacturers' hands at the beginning of 1937 and at the close of the year.

Paper and allied products reported as materials and supplies inventory at the beginning of 1937 amounting to $166,292,221 and a finished products inventory of $80,387,287, or a total of $246,679,508.

At the close of 1937 the industry reported raw materials and supplies on hand worth $201,905,516 and finished products worth $99,532,138, or a total of $301,437,654.

China Still Dependent Upon Imported Newsprint

• There was no domestic production of newsprint paper on a commercial scale in China during 1938.

The construction of the projected newsprint mill at Wenchow was indefinitely postponed, owing to the disrupted conditions resulting from the Sino-Japanese hostilities.

Reports from the American Consulate General at Canton indicated that the Kwantung Provincial Paper Mill, which was producing experimental lots of newsprint in the early summer months, expected to start regular production in August, but the date for the anticipated commencement of commercial production later was announced as October 1, 1938, and reports describing the capture of Canton by the Japanese in late October stated that the paper mill, among other property, was destroyed by fire and bombing. It is not likely that commercial production ever began as conditions in South China were seriously upset by Japanese aerial bombing before the beginning of October. The actual extent of damage to this mill, which was completed in 1937 at an estimated cost of U. S. $2,550,000, is not definitely known, but it is believed that it was destroyed almost entirely.

News bulletins from Chinese sources state that a new paper mill, the Min Foong Paper Mill, with capital of 1,400,000 yuan (yuan equals $0.1581 in United States currency) has been organized at Kunming, capital of Yunnan Province, by business and banking interests. Orders have already been placed in Germany for the purchase of equipment capable of producing 5 tons of newsprint paper daily. Further information on this subject will be forwarded when available.

So far as is known there is no Chinese mill producing newsprint paper at the present time (Office of the American Commercial Attache, Shanghai.)

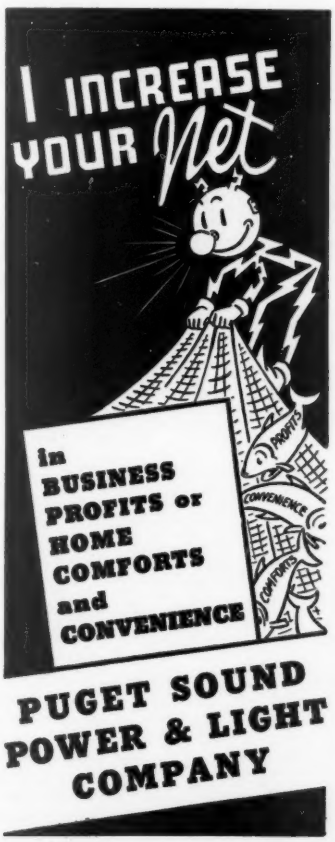
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I have a special built two color offset press that feeds from a roll and cuts off or rewinds. It takes roll 28" wide and 22" cylinder, but is made so that cylinders are interchangeable from 18 to 34". Can be used for either wet or dry offset. Cost $14,000.00 and as good as new. Price $7500.00. Terms can be arranged. Now in operation. Tom Donahue, 200 Davis St., San Francisco, Calif.

Wanted—

Wanted used triplicate effect evaporators, also plate filters of press type. Please furnish specifications. Reply, Box 10, care Pacific Pulp & Paper Industry, 71 Columbia St., Seattle, Washington.





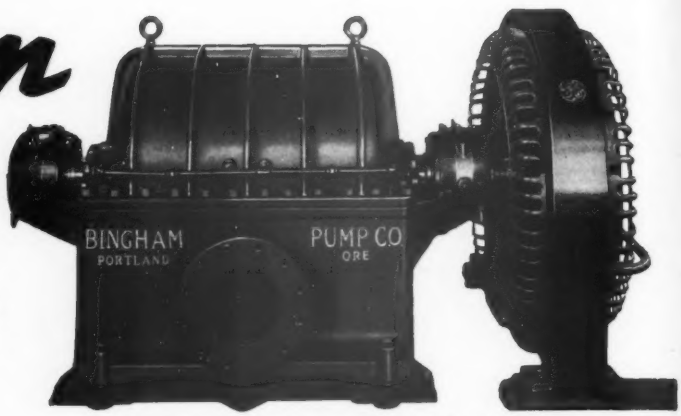
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Designed for acid pressure systems, the Bingham SO_2 Compressor controls the manufacture of acid by allowing for pressure adjustment according to water temperature. The Bingham SO_2 Compressor has but one rotating part—no metal-to-metal contacts—made of special acid-resistant materials — requires but a minimum of maintenance..



Bingham horizontally split-shell SO_2 Compressor

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AND
A *dollar's* WORTH OF IRONING

THE SQUEEZE of the padded wringer rollers at your household washing machine removes most of the water from the garments. Ironing completes the drying process and gives the finish to the job. The first operation costs next to nothing; the second runs into money. • In like manner the squeeze of the rolls against the felt at the wet end of a paper machine removes the water from the web at a nominal cost per ton of paper. The dryer rolls evaporate the remaining moisture and put the finish on the paper. The fuel consumed in generating the steam to heat these rolls is a major item of cost in paper mill operation. • A wet-end felt must have "guts" to stand up under the terrific speed and punishment to which it is subjected. This is why paper manufacturers who know their costs use Hamilton Felts as standard equipment. Hamilton Felts have "guts."

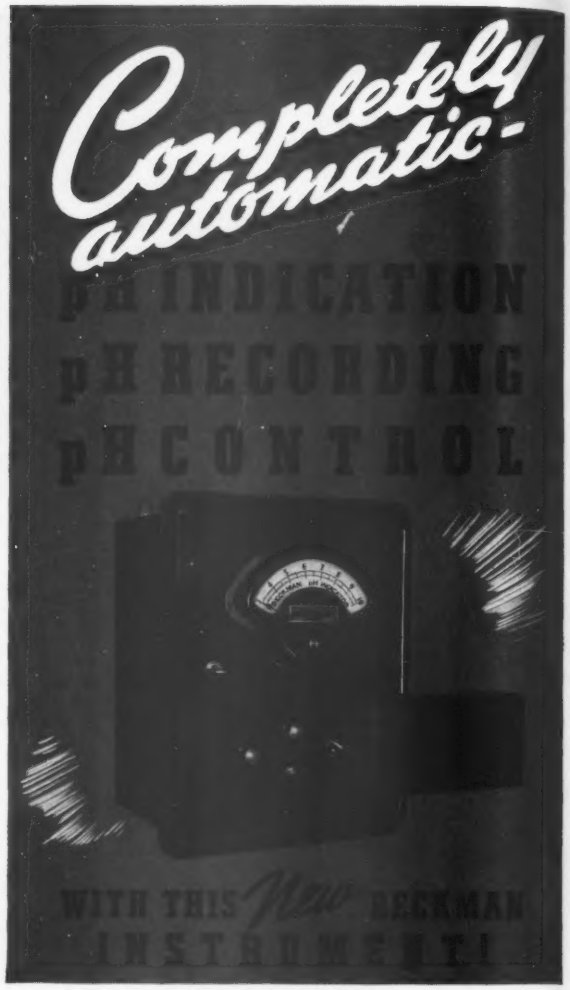
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Hamilton Felts



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★ **With this new Beckman Instrument pH control can be automatically maintained within narrow or wide limits to meet your particular requirements.**

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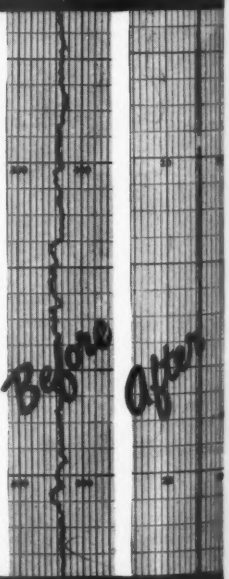
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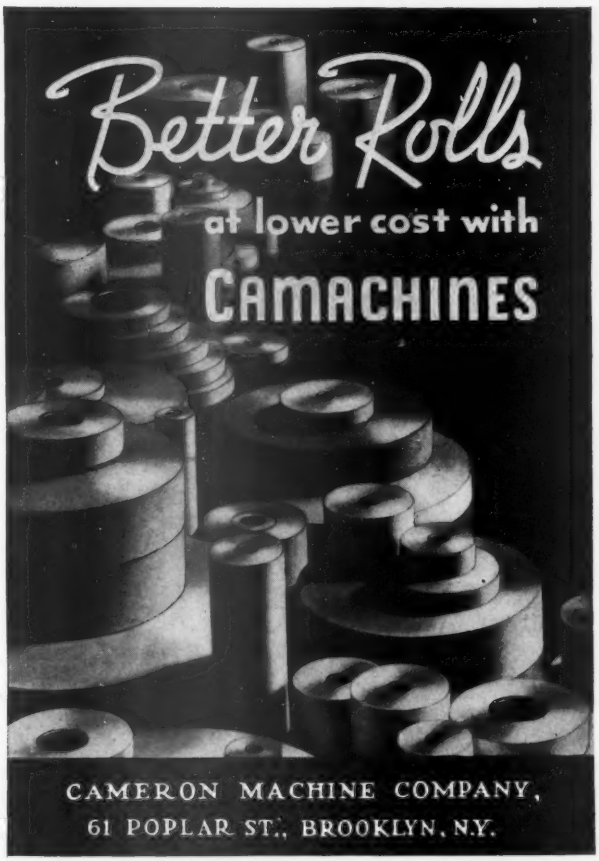
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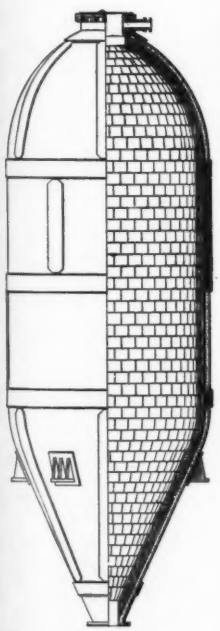
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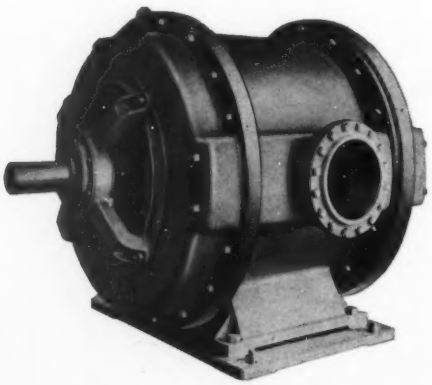
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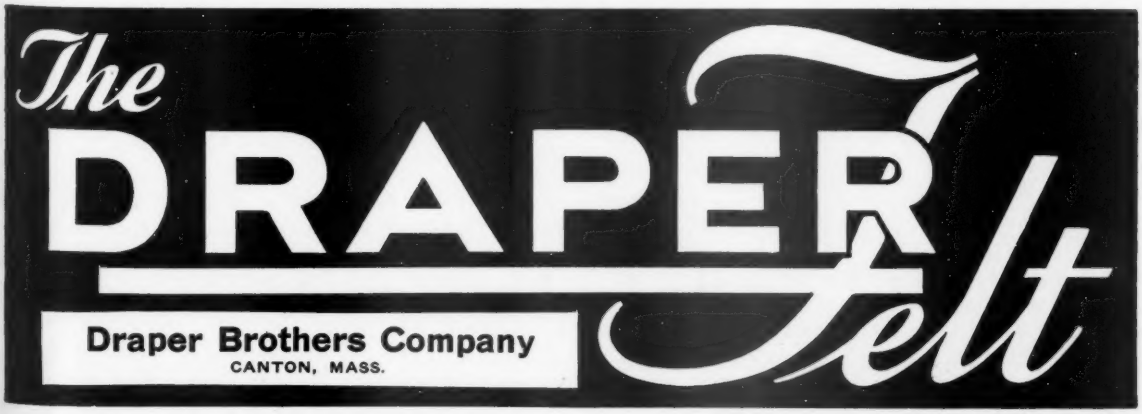
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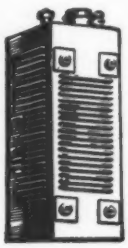
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INDEX OF ADVERTISERS

A

Albany Felt Co. 44
American Potash & Chemical Co. 119
American Pulp & Paper Mill Superintendents' Assn., Inc. 124
Appleton Wire Works, Inc. 127
Appleton Woolen Mills 133
Associated Oil Co. 100

B

Beloit Iron Works 1
Bingham Pump Co. 126
Black Clawson Co. 50
Brown Instrument Co. 96
Brubaker Aerial Surveys 134
Bulkley Dunton Pulp Co. 8

C

Cameron Machine Co. 131
Cavin, Marshall & Barr 134
Chemipulp Process, Inc. 2
Chemical Lining Engineers, Inc. 131
Chromium Corporation of America 80

D

DeGuere, L. A. 134
Draper Brothers Co. 133
Du Pont de Nemours & Co., E. I. 110

E

Eastwood Nealley Corp. ..... Outside Back Cover
Edison Storage Battery Co. 134
Electric Steel Foundry Co. 94
Everett Pulp & Paper Co. 3
Elwell-Parker Electric Co. 120

F

Ferguson & Co., Hardy S. 135
Freeport Sulphur Co. 76

G

General Dyestuff Corp. 48
General Electric Co. 130
Great Western Electro-Chemical Co. 5

H

Hammermill Paper Co. 126
Hardy, George F. 135
Hawley Pulp & Paper Co. 116
Hodges, Walter S. 127
Hooker Electrochemical Co. 92
Hotel Multnomah 125
Huyck & Sons Co., F. C. 4

I

Inland Empire Paper Co. 132

L

Lindsay Wire Weaving Co. 130
Link-Belt Co. 79
Lockport Felt Co. 88

M

Merrick Scale Mfg. Co. 134
Morden Machines Co. 134

N

Nash Engineering Co. 132
National Tank & Pipe Co. 135
National Technical Laboratories 128
Northwest Filter Co. 133
Northwest Lead Co. 134

O

Orr Felt & Blanket Co. 129

P

Pacific Coast Supply Co. 64
Pacific National Bank 131
Paper Makers Chemical Co. 114
Paraffine Companies, Inc., The 130
Pennsylvania Salt Mfg. Co. of Washington ..... Inside Front Cover
Perkins-Goodwin Co. 52
Plant Rubber & Asbestos Works 129
Puget Sound Power & Light Co. 125
Puget Sound Pulp & Timber Co. 68
Pulp Bleaching Co. 60

R

Rayonier Incorporated 90
Roche Harbor Lime & Cement Co. 134
Ross Engineering Corp., J. O. 82
Rounds-Burchett Limited 134

S

St. Regis Kraft Co. 122
Schoenwerk, O. C. 135
Selden, Stanley 135
Shartle Bros. Machine Co. 104
Shell Oil Co. ..... Inside Back Cover
Shuler & Benninghofen 128
Soundview Pulp Co. 112
Stauffer Chemical Co. 133
Stebbins Engineering Corp. 46
Stetson-Ross Machine Co. 108-109

T

Taylor Instrument Companies 74
Texas Gulf Sulphur Co. 54

V

Vaughan Motor Co. 84

W

Warren Steam Pump Co. 131
Waterbury & Sons Co., H. 134
Western Gear Works 58
Western Precipitation Corp. 132
Westinghouse Electric & Mfg. Co. 102
Weyerhaeuser Timber Co. 86
Worthington Pump & Machinery Corp. 130

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Table of Contents

Review Articles

	Page
The Underprivileged One-Third	9
Looking Back on 1938	11
The Effect of Depreciated Foreign Currencies on Commodity Prices in the United States	22
United States Paper, Paperboard and Pulp Production and Consumption in 1938	29
United States Newsprint Production Lowest in 35 Years	34
Foreign Pulp Supplied 75.34% of United States Market in 1938	38
Imports of Pulp and Paper Declined in 1938	40
United States Exports of Pulp and Paper Declined in 1938	56
Pacific Coast Wage Rates Continue Highest in World Industry	62
Subsidized Import Competition Threatens to Cripple United States Wood Pulp Industry	66
Rayon Production Continues Upward—Consumption Keeps Pace	70
Pulpwood Resources of the Pacific Northwest	77
Trade Agreements Undermine Price Structure of American Paper Industry	81
Census of Manufactures of the United States Pulp and Paper Industries for 1937	85
Foreign Pulp Producers Exported Less in 1938	91
The Swedish Wood Pulp Industry in 1938	95
Japan's 1938 Wood Pulp Imports Declined 73.5% from 1937 Record	98

Statistical Tables

Pacific Coast Industry:

U. S. Pacific Coast Wood Pulp Production, 1923-1938	11
British Columbia Wood Pulp Production, 1923-1938	11
Total Pacific Coast Wood Pulp Production, 1925-1938	13
Total Pacific Coast Pulpwood Consumption, 1925-1938	13
Total Pacific Coast Paper Production, 1932-1938	13
British Columbia Pulp and Paper Production, 1919-1938	32
Pulp and Paper Capacities of Pacific Coast Mills	20, 21
Pacific Coast Wood Pulp Imports, 1938	47
Pacific Coast Paper Imports, 1938	53
Pacific Coast Imports of Pulpwood, 1938	55
Exports of Wood Pulp from Pacific Coast Ports, 1932-1938	56
Exports of Paper from Pacific Coast Ports, 1932-1938	56
Exports of Wood Pulp from Pacific Coast Ports By Countries of Destination, 1938	59
Exports of Paperboard from Pacific Coast Ports, 1932-1938	59
Exports of Paper from Pacific Coast Ports By Countries of Destination, 1938	61
Exports of Pulp and Paper from British Columbia, 1930-1938	59
Payrolls, State of Washington, and Hours Worked, 1927-1938	63
Payrolls, State of Oregon, and Days Worked, 1927-1938	65
Volume of Pulpwoods, other than Douglas fir, in Western Washington and Oregon Available for Cutting	77
Volume of Pulpwoods, other than Douglas fir, In Western Washington and Oregon by Counties	78
Pulpwood Resources of the Inland Empire	78

United States Industry:

Wood Pulp Prices in the United States, 1928-1938	15
United States Wood Pulp Production by Regions, 1938	17
Regional Percentages of U. S. Wood Pulp Production, 1936-1938	17
United States Paper and Paperboard Production, 1934-1938	29
Production of Wood Pulp by Grades In U. S., 1925-1938	31
Summary for 1938 of U. S. Wood Pulp Production, Shipments and Stocks	32
Paperboard Mill Census of the U. S., 1929-1938	33
U. S. Paperboard Operation, Production and Orders, 1930-1938	33
Sources of Newsprint Used in the United States, 1913-1938	36
Proportion of U. S. Market for Wood Pulp Supplied by American Pulp Mills and Foreign Pulp Mills, 1936-1938	38
Imports of Wood Pulp into the U. S. by Grades and Countries of Origin, with value, 1938	42
Imports of Bleached Sulphite Pulp into the U. S., 1920-1938	43
U. S. Wood Pulp Imports, 1922-1938	43
Imports of Bleached Sulphate Pulp into the U. S. By Countries of Origin, 1930-1938	45
Imports of Bleached Sulphite Pulp into the U. S. by Countries of Origin, 1920-1938	47
Imports of Bleached and Unbleached Sulphate Pulp into the U. S. by Countries of Origin, 1920-1938	47
U. S. Imports of Wood Pulp by Grades, Value and Countries of Origin, 1937	51
Paper and Pulp Imports into the United States, 1937-1938	53
Paper and Pulp Exports from the United States, 1937-1938	57
Cellulose Consumption by the U. S. Rayon Industry, 1930-1938	75
Prices of Rayon Grades of Wood Pulp and of Cotton Linters Pulp, 1929-1938	77
Summary of U. S. Pulp Industry, Census of Manufactures, 1933-1935-1937	85
Summary of U. S. Wood Pulp Production by Kind, Quantity and Value, Census of Manufactures, 1935-1937	87
Pulpwood Consumption in the U. S., Quantity, Kind of Wood and Cost, Census of Manufactures, 1935-1937	87
Summary of the U. S. Paper Industry, Census of Manufactures, 1933-1935-1937	89
Production of Paper and Paperboard in the U. S. by Kind, Quantity and Value, Census of Mannufactures, 1935-1937	89
Pulpwood Imports into the United States by type in cords, 1930-1938	125
Exports of Newsprint from the United States by Countries of Destination, 1935-1938	125

Other Statistical Tables:

Exports of Wood Pulp from Canada by Countries of Destination, 1938	91
Exports of Chemical Wood Pulp from Germany, by Countries of Destination, 1938	93
Exports of Wood Pulp from Sweden by Grades and Countries of Destination, 1938	93
Wood Pulp Production in Sweden by Grades, 1925-1938	95
Exports of Wood Pulp from Sweden by Grades, 1925-1938	95
Summary of Japanese Wood Pulp Imports by Countries of Origin, 1928-1938	99
Imports of Paper and Rayon Pulp into Japan, by Countries of Origin, 1927-1938	101
Exports of Wood Pulp to Japan from Pacific Coast Ports, 1938	103
Imports of Wood Pulp into Japan from Manchuria, 1938	103
Wood Pulp Production in the Japanese Empire by Grades, 1925-1938	103
Production of Wood Pulp in Japan Proper, 1935-1938	103
Canadian Wood Pulp Production by Grades, 1920-1938	125

Graphs and Maps

Pacific Coast Industry:

Wood Pulp Production of the Pacific Coast, 1921-1938	12
Comparative Growth of Pacific Coast Pulp and Paper Industry, 1923-1938	19
Map of Western Washington and Western Oregon Pulpwood Resources with volume by counties	83

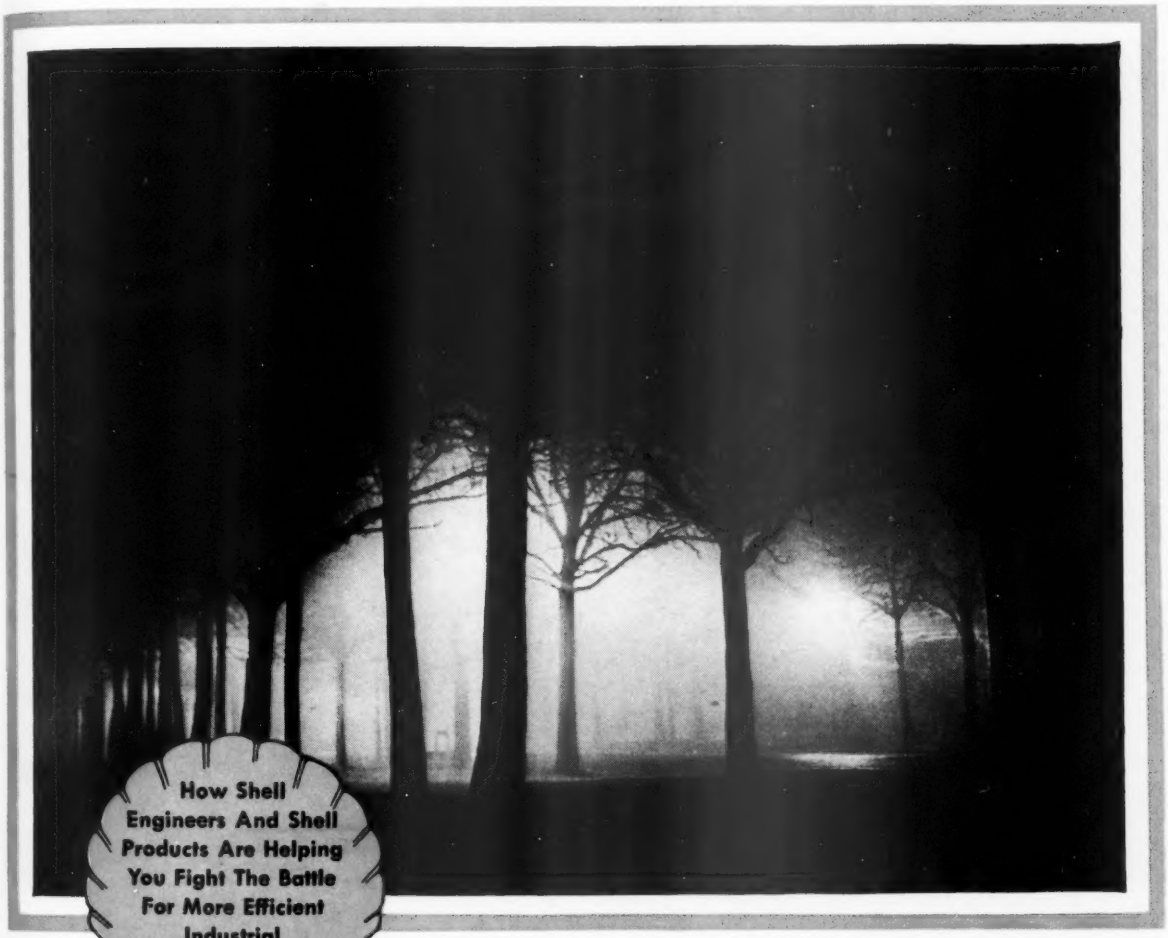
United States Industry:

Wood Pulp Price Trends by Grades, 1926-1938	14
"Evidence of White Man's Magic"	16
Pulpwood Prices in the United States by region, 1929-1938	18
Projected Curve of Paper Consumption in the U. S. to 1950	28
U. S. Consumption of Wood Pulp, All Grades, 1904-1938	30
Newsprint Production in U. S., Canada and Newfoundland, 1913-1938	36
Total Wood Pulp Production, Consumption, Imports, Exports and Total Paper Production in U. S., 1900-1938	37
Wood Pulp Imports into the United States, 1904-1938	41
United States Imports of Unbleached Sulphite Pulp by Country of Origin, 1920-1938	49
United States Imports of Bleached Sulphite Pulp by Countries of Origin, 1920-1938	45
United States Imports of Bleached Sulphate Pulp by Countries of Origin, 1921-1938	51
United States Imports of Unbleached Sulphate Pulp, by Countries of Origin, 1920-1921	55
Average Hourly Wages Earned by Pulp and Paper Mill Employees in Several Countries	65
Production of Rayon and Staple Fiber by Countries, 1910-1938	71

Lists:

Manufacturers on the Pacific Coast of Pulp, Paper, Paperboard and Converted Products	106
Manufacturers of Rayon Yarn in the United States, Location and Number of their plants	73
Manufacturers of Cellulose Films in the United States, Location of plants	73

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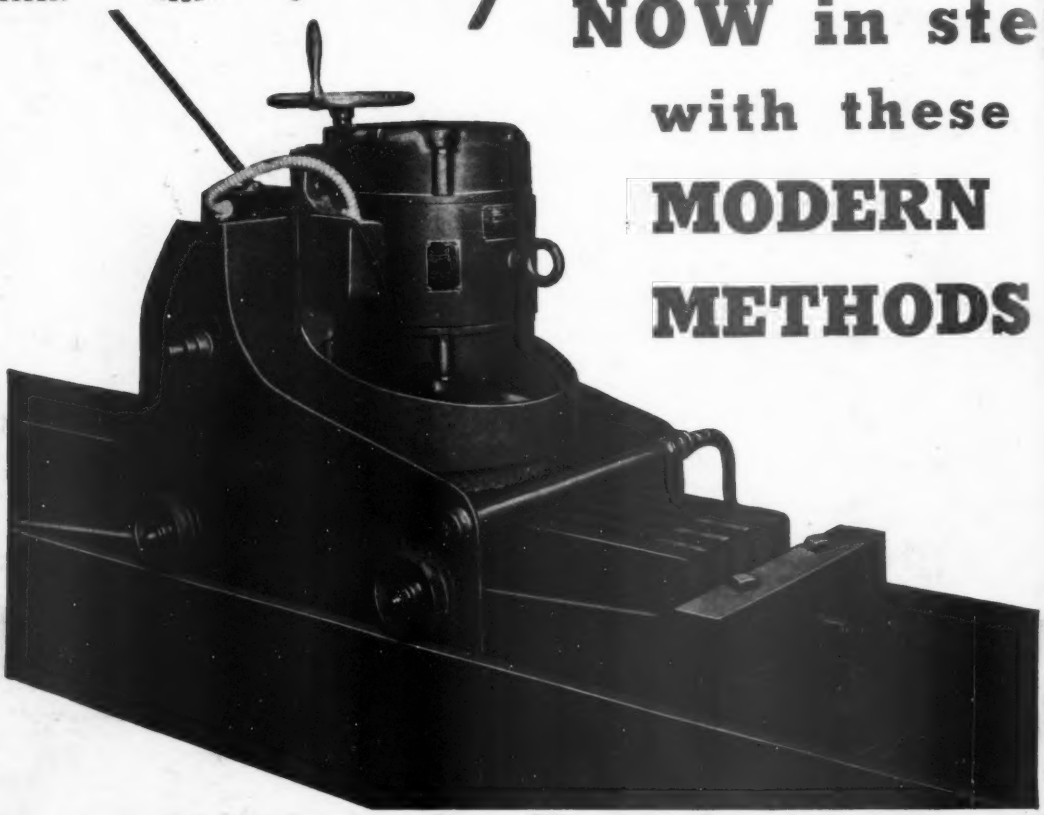
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